

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



MONTHLY MAGAZINE.

AUGUST, 1880.

A LITTLE RECREATION, a few days of rest or play, during the heated summer season, is not necessarily wasted time. If properly used, these days of leisure may be the most profitable of the whole year, bringing a golden harvest of good things to mind and heart and body, and, perhaps, to estate. The mechanic does not consider time employed in sharpening and preparing his tools lost time. The athlete spends months of training for an hour's real work, and thinks the time well spent. The gardener knows that his bulbs lie in the ground apparently for no purpose a large portion of the time, sometimes even in the active, growing, summer season, bearing no bright flowers, not even a pleasant leaf. He is not impatient, for they are not idle, but gathering from earth and air, and sunshine and shower, a precious store to be changed by some mysterious operation of nature into gems of loveliness. All nature has seasons of rest, after times of activity. Let us, as nature teaches, rest awhile from labor and care, if, like the flowers, we have earned repose by dispensing beauty and happiness all around—by an active season of good deeds that have made others better and happier. Like them, too, we may lay up a treasure of good things that will aid in making the future alike pleasant and useful. It is easy to combine pleasure and instruction; indeed, we can hardly conceive of very great pleasure from any re-

creation that is not flavored with instruction. Few may be able to take long and expensive journeys, across the continent or the ocean, but excursions are now made to most places of interest so frequently, and so rapidly, and at such a trifling cost, as to seem to meet alike the convenience and pockets of all. But the world is full of interest and beauty. No one can travel two miles from his own door without seeing many things full of interest and as wonderfully made as the Alps or the Sierras, and from which he can learn lessons of wisdom without money or price. We can see but little of this great world, but all delight to read of its wonders; so, as an expression of thankfulness to our hosts of subscribers, and particularly to those who have labored so earnestly and successfully to increase our circulation this year, we make this number larger than usual, and call it the MID-SUMMER or HOLIDAY NUMBER, and devote a few pages to descriptions of routes of travel and pleasant summer resorts, so that those who are unable to leave home may, under the shade of the vine, or the orchard, or some other cool retreat, enjoy, in imagination, at least, what others obtain at great expense and some discomfort. Travel is not all pleasure, and those who are compelled to remain in pleasant houses in the country, escape a great many difficulties, and don't always know how much cause they have for thankfulness.

The popular and fashionable journey is to Europe, and thousands of Americans every summer cross the stormy Atlantic in pursuit of pleasure, health or information, while still others are driven across the sea by the breezes of fashion. It has been said that persons should see all of their own country before visiting other lands. We do not think this altogether true, yet it is quite mortifying to be unable to answer questions by foreigners about important places in our own country of which we know nothing. We once met an American gentleman in Europe who declared that he had told in two months more fibs about Niagara Falls than in all his life before on all subjects, being ashamed to acknowledge he had never seen this world's wonder. There is, however, nothing like a look at other countries to give a just

While in Europe we can see more of the great works of man—the architect, the artist, and the engineer—in no other country can we see more of the wonderful works of the Creator than in America. Niagara has no rival, while the grand prairies of the West, the Sierras and the Yosemite and the Great Trees challenge the admiration of the world, and are visited by people of all lands.

ACROSS THE CONTINENT.

The grand American tour across the continent to the Pacific is one not equaled, perhaps, by any other, for diversity, grandeur of scenery and the ease and comfort with which it is made. Three thousand miles, without an hour's delay or an moment's fatigue, or the loss of a meal, is something near the perfection of travel.



THE GREAT TREES OF CALIFORNIA.

appreciation of our weaknesses. He who never moves from his own town or village, is apt to think it perfect, while those who travel to other towns, with their eyes open, see many new things to admire, some of which are sure to be adopted. In visiting a new continent, we seem to see a new world. Customs and manners, horticulture, agriculture, architecture, ideas and modes of expression are new and wonderfully strange, and while we see many unpleasant things, much to make us proud of country and home, we also see much to admire. With time and means at command a look at the old countries is above all things to be desired, but as we have not trodden European soil for several years, and in our publications at various times have given our readers sketches of what we saw and heard on our last journey, we defer further remarks until another season, when we hope to spend some time among the gardens and parks of Europe, and then hope to present facts new and interesting.

To persons from the east, bound for California, the broad prairies and almost boundless Corn fields of Illinois and Iowa are by no means the least interesting part of the journey. If there is any country bearing greater evidences of the fertility of its soil, and the enterprise and industry of its people, than that through which the tourist passes on the route from Chicago to Council Bluffs, we certainly have never seen it in our wanderings.

At Omaha, on the western bank of the Missouri river, and opposite Council Bluffs, the western journey really commences, where we take the cars of the Union Pacific Railroad. These are provided with sleeping accommodations, and lunch houses are situated at convenient distances, where meals can be had for a dollar, which is certainly all they are worth. Soon after leaving Omaha, we strike the alkali plains, the surface being flat and uninteresting and coated with alkali, and almost everywhere are seen the prairie dogs, in their little villages,

and the graceful antelope. Every one is looking and longing for the Rocky Mountains, but so gradual is the ascent that Sherman, more than eight thousand feet above the sea, is reached before passengers are aware of the fact. Laramie, some twenty miles further west, is a surprise; for here instead of a pretty town of several thousand inhabitants, we had expected to see a few grizzly bears or, at least, a herd of buffaloes. Between Laramie and Ogden is to be found rugged, romantic scenery, such as few ever before beheld, and here terminates the Union Pacific Road, at which point we change cars for the Central Pacific, but most tourists take the Utah Central and a ride of thirty-six miles for Salt Lake City, the seat of the Mormons. Here we saw the Tabernacle, and saw and heard the great men of the Mormon Church.

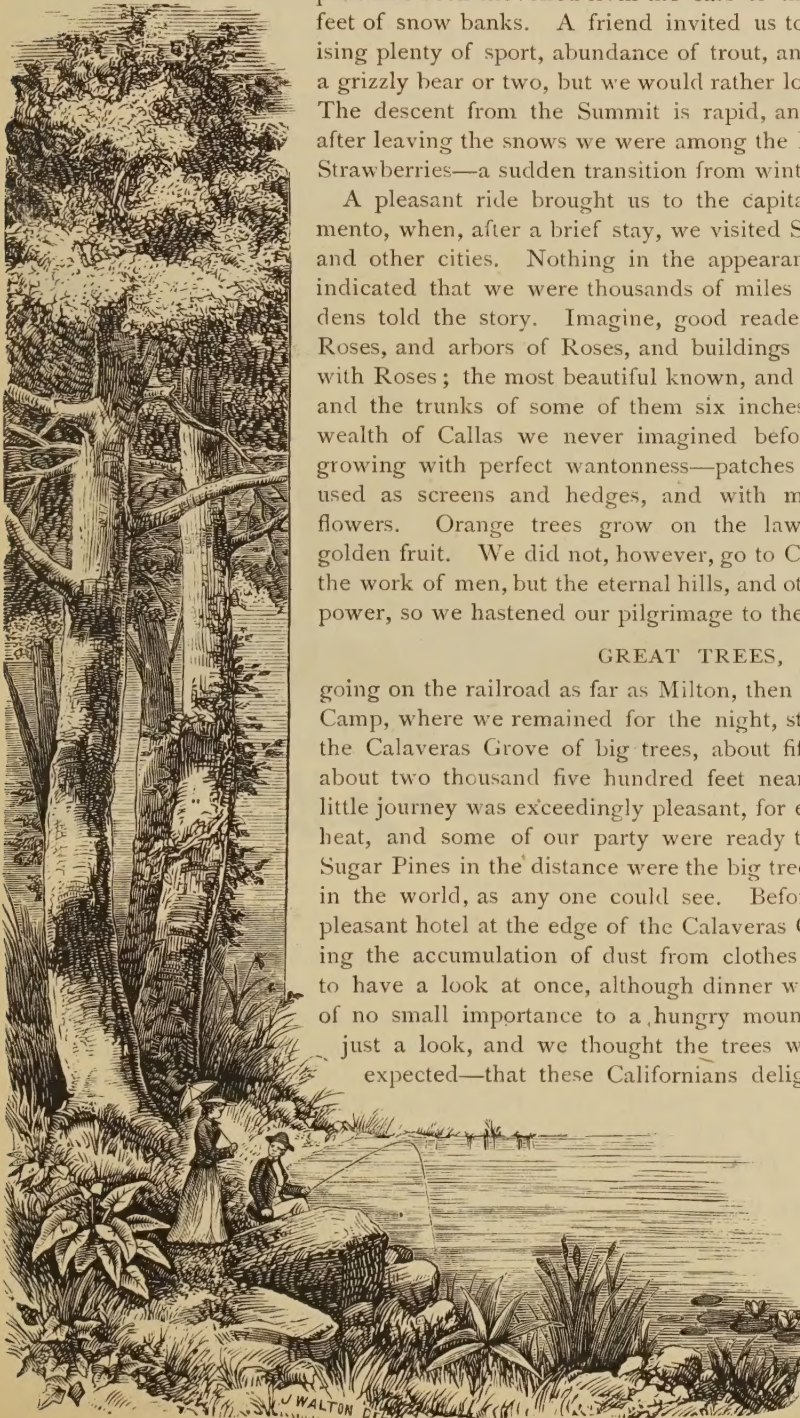
Returning to Ogden, we reached the Summit after thirty hours' travel, the highest point of the whole journey. Here we took breakfast, amid the snow; for, although the middle of May, a path had been shovelled from the cars to the hotel, through twenty feet of snow banks. A friend invited us to stay a few days, promising plenty of sport, abundance of trout, and a prospect of finding a grizzly bear or two, but we would rather lose than find such game. The descent from the Summit is rapid, and in three or four hours after leaving the snows we were among the Roses and Cherries and Strawberries—a sudden transition from winter to summer.

A pleasant ride brought us to the capital of California, Sacramento, when, after a brief stay, we visited San Francisco, San Jose, and other cities. Nothing in the appearance of houses or streets indicated that we were thousands of miles from home, but the gardens told the story. Imagine, good reader of the north, trees of Roses, and arbors of Roses, and buildings and porches smothered with Roses; the most beautiful known, and as large as ladies' hats, and the trunks of some of them six inches in diameter. Such a wealth of Callas we never imagined before—Callas everywhere, growing with perfect wantonness—patches yards in diameter, and used as screens and hedges, and with multitudes of monstrous flowers. Orange trees grow on the lawns, covered with their golden fruit. We did not, however, go to California to see its cities, the work of men, but the eternal hills, and other works of a mightier power, so we hastened our pilgrimage to the

GREAT TREES,

going on the railroad as far as Milton, then by carriage to Murphy's Camp, where we remained for the night, starting next morning for the Calaveras Grove of big trees, about fifteen miles distant, and about two thousand five hundred feet nearer the heavens. This little journey was exceedingly pleasant, for expectation was at fever heat, and some of our party were ready to affirm that the grand Sugar Pines in the distance were the big trees, and the greatest trees in the world, as any one could see. Before noon we reached the pleasant hotel at the edge of the Calaveras Grove, and after removing the accumulation of dust from clothes and person, determined to have a look at once, although dinner was announced—a matter of no small importance to a hungry mountain traveler. We had just a look, and we thought the trees were not as large as we expected—that these Californians delight in big stories as well

as big trees—then thought they were pretty large, very large, but not big enough to make so much fuss about—then we looked again, and didn't have a very decided opinion; in fact, had become somewhat mixed, and thought we had better



go to dinner. When we came out again the trees were a good deal larger, and they got larger every moment we looked at them. So we walked through this grove of fifty acres, containing about one hundred big trees, and they were certainly large—they must be large—figures tell the truth, and we passed a string around some of them that measured between sixty and seventy feet, and others, by pacing, we made twenty feet and over in diameter; and no doubt over a hundred feet to the lowest branch, while the tops soared three hundred feet above us. Of course, such trees were entitled to the name "Big," but their trunks are

shrubs trees—Sugar Pines and Yellow Pines and Douglas Firs—not growing closely together, as in eastern woods, but standing in groups and single specimens as if planted by the Great Landscape Gardener for a mammoth park; indeed, we could hardly realize that this was nature, and were constantly looking for the mansion of some lordly proprietor. With delight and astonishment we beheld the Valley, stood on its brink, and viewed a scene never to be forgotten.

The Yosemite Valley is but a little valley, although its fame has extended over the civilized world—only six to eight miles in length, and



THE YOSEMITE VALLEY.

as smooth and graceful as arrows, and everything around is large, and it is difficult at first to realize their immensity. These big trees possess no beauty, save in their trunks, the foliage being thin and scattering and almost out of sight, while the trunk presents the most graceful shaft mortal eye ever beheld. Our engraving shows a view of this grove, the smallest trees being Sugar Pines.

THE YOSEMITE VALLEY.

The next day a start was made for the Yosemite, which was reached in two days of dusty but delightful travel. As we neared the great object of our anxieties and toils, the scenery became more grand and yet more beautiful, for the hills became mountains and the

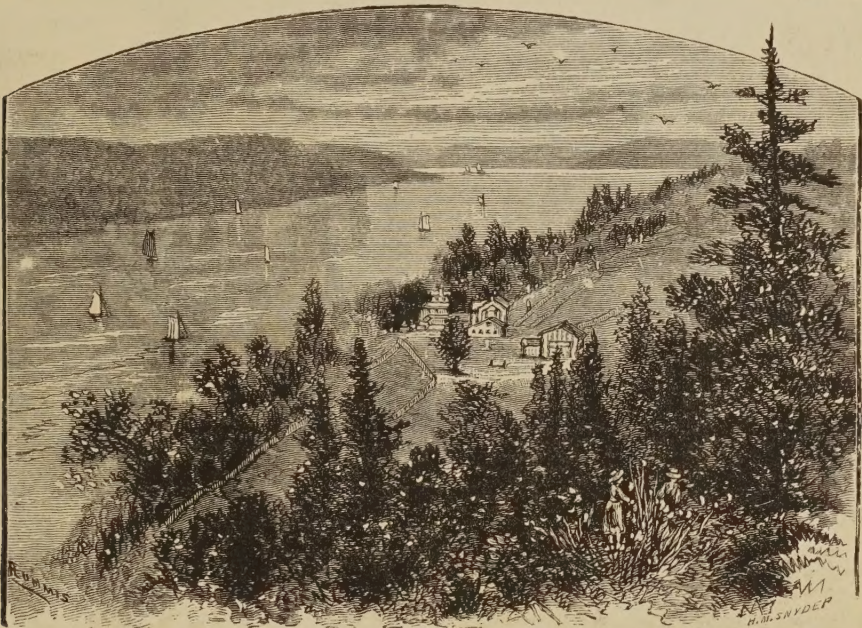
varying from half a mile to a mile in width; yet, for beauty and sublimity, it stands unrivaled. It is surrounded by granite rocks, in some places nearly perpendicular, in many they are quite so, in others the summit overhanging the base, and varying from two to four thousand feet in height. Through this Valley flows a river, called the Merced, or River of Mercy. This river is fed by water from the melting snows of the surrounding mountains, which finds its way to the valley by four or five streams. As the crystal waters leap from the mountain tops to the valley, in some cases two thousand feet in one perpendicular fall, in others by a succession of falls and rapids three thousand feet, the glory of the scene may be imagined, but cannot be described. If the day is warm, so as to melt the snow

rapidly, the water reaches the valley about six o'clock in the evening, and it continues to rise until nearly midnight, often overflowing the river banks and all low parts of the valley, so as to render traveling on foot somewhat difficult. By the morning the water has subsided. The soil in the valley is mainly composed of disintegrated granite. There is considerable Cedar and Pine and Oak timber in the valley and on the mountain sides.

Those who visit the valley will generally feel somewhat fatigued, and it is best to take things pretty easily the first day, especially if not accustomed to horseback riding. A ride up the valley to Mirror Lake, to see the reflection of the mountains in its glassy waters, will be both

RICHFIELD SPRINGS.

Otsego county, in the State of New York, is classic ground, rendered so by stirring events in the early history of that section of country, as well as by the genius of America's great author, COOPER. One of the most charming summer resorts, for both pleasure seekers and invalids, is Richfield Springs, in that county, about forty miles from Utica, and seventy from Albany. The mineral waters are justly celebrated, and their value, tradition says, was first learned by an Indian Medicine Man, who secretly obtained the health-giving fluid in the night, and thus was enabled to cure all manner of diseases. Success made him proud and haughty, arrogating to himself almost miraculous powers.



OTSEGO LAKE.

easy and pleasant, or a ride down the valley four miles to Bridal Veil Falls, where a stream leaps down nine hundred feet upon the rocks, scattering a silvery spray over the surrounding landscape, will well repay a visit. In the sunshine no more beautiful object was ever beheld on earth. We are enveloped in a rainbow atmosphere; every tree and shrub is tinted with its glorious colors, and every person surrounded and covered with a halo of glory. The next day it is well to commence work in earnest. Climb the mountains—to the upper Yosemite Falls, which leaps sixteen hundred feet, to Glacier Rock, or to the Nevada and Vernal Falls; but do not undertake too much in one day. The distances and heights are deceiving, and tiresome. It will require often four hours' toiling to ascend a mountain three thousand feet in height.

This offended the Great Spirit, who sank the island on which he lived in the deep waters of Canadarago Lake. Some imagine that they can even now see the tops of the trees as they peer into the dark waters. Every hill and valley and lake in this region is rich in traditions.

The village of Richfield is on an elevated plateau, some two thousand feet above the sea, and almost surrounded with hills. The scenery is not rugged and picturesque, but varied and graceful—hills and valley and lakes all combine to form a most delightful panorama. Our engraving shows a view of Otsego Lake, from what is called Five Mile Point. The walks and drives are all that eye and heart can desire. The grounds are tastefully laid out and neatly kept, adorned with beds of flowers and foliage plants, which we have had the pleasure of arranging for several years.

THE THOUSAND ISLANDS.

Many of our readers have seen, and all have heard of the multitude of islands of all forms and sizes, in the St. Lawrence River, known as the Thousand Islands. As a resort for summer pleasure-seekers, and those desiring rest and recuperation, these islands have of late years become exceedingly popular, and are visited by many thousands every year from the United States and Canada, embracing among the number some of the leading statesmen of both countries. Although called the Thousand Islands, they really number about two thousand, and half of these are in the neighborhood of Alexandria Bay. The fishing in the waters of the

that all enjoyed a true "feast of reason and and flow of soul."

One of the largest of the islands, we believe, is Well's Island. The upper end of this island, about five hundred acres, has for some years been occupied by the Methodists, who have named it Thousand Island Park, and to its natural beauties have been added delightful drives and walks, while a village of cottages, bathing-houses, &c., have been erected. Here are held camp meetings, and Sunday school and educational conventions, which are visited by tens of thousands from the United States and Canada.

Later, the Presbyterians purchased a tract of



"BONNIE CASTLE," RESIDENCE OF DR. J. G. HOLLAND.

St. Lawrence is known to be excellent, and bass and muskallonge are taken in quite sufficient numbers certainly to satisfy an amateur fisherman.

The accommodations at the hotels on the main land are generally good, while the new Crossman House is of immense proportions, and furnishes excellent accommodations for a host of visitors. Yachts and boats and any possible convenience is readily obtained.

Of late years, our summer resorts have partaken somewhat of a literary and religious character, and we have attended some of these summer colleges, if we may be allowed the expression, when valuable information was imparted in the most pleasant way imaginable, and received with the greatest enthusiasm, showing

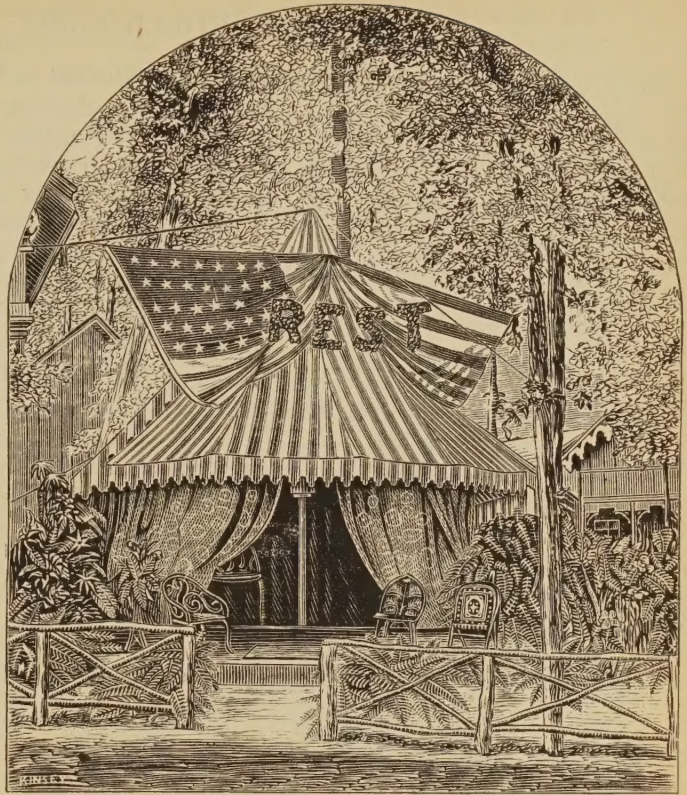
land, about the same in size, and named it Westminster Park. This has been rapidly improved, having, it is said, fifteen miles of winding drives and charming walks. Still later, a Baptist Association purchased a beautiful island, about two miles from Thousand Island Park, and improvements are to be made this season.

Many of our literary men find the Thousand Islands a quiet summer home. One of the most desirable points on the main land, and jutting out into the river, is occupied by the cottage of Dr. J. G. HOLLAND, editor of *Scribner's Monthly*. It is a somewhat luxurious summer residence, as will be seen by the engraving we give, with gardener's cottage, docks, &c. Here, it is said, the Doctor not only spends many pleasant days with literary friends, but

here, also, was done much of the his best work during the past three or four years.

CHAUTAUQUA LAKE.

One of the most beautiful inland lakes in America is the Chautauqua, situated in the southwestern part of the State of New York, and within a few miles of Lake Erie, though seven hundred feet higher, so that this lake could be readily drained into Lake Erie. On the borders of this sheet of water, a number of acres were selected years ago by an association of Methodists interested in Sabbath school instruction, under the lead, we believe, of Dr. VINCENT, which is called Fair Point. Hundreds of neat cottages have been erected, and during the season there are also hundreds of tents. Every year a Sabbath school assembly is held, visited by thousands, and a regular literary and scientific course of instruction adopted, Chautauqua text books printed, and regular courses of scientific and other lectures delivered by the best talent of the country. This is the foremost of all our summer resorts, so far as the attainment of knowledge is concerned—a college in the woods. Once, on a visit to these grounds, we met General GRANT, quietly seated in a beautiful tent—



AT CHAUTAUQUA LAKE.

not smoking, however, but reading—and had a photograph taken, which we present to our readers.

A Baptist association have procured choice grounds on the opposite side of the lake, which have been laid out with fine taste. An elegant hotel has also been erected.

PUNCTATUM LILY.

Among the beautiful Lilies, and the Creator never made a more beautiful family of flowers, the Punctatum is one of the best, if not the best of all. It is our special favorite of the Lancifolium or Speciosum class. The white is almost as pure as snow, while the pink spots are peculiarly delicate. Indeed, the whole flower is so fairy-like that we have found it difficult to obtain a correct painting, the artists contending for strength of shading, which gave the flower an appearance foreign to its character. We have, however, succeeded in making a colored plate that possesses delicacy, if not strength, and, in this, is like the flower, and the best representation of this Lily we have ever seen.

This Lily, like all the Lancifoliums, is perfectly hardy, never suffering that we have ever heard from the severest northern winter, nor

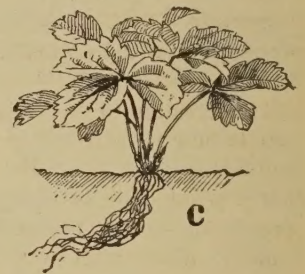
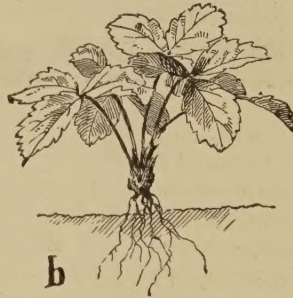
showing the least tendency to disease, as most of the California Lilies do, and also the Auratum, which, though really gorgeous when healthy and strong, seems to be quite unreliable. The best success we have had with them has been when planted among thin shrubbery, where they are somewhat protected from the sun.

The Punctatum we place at the head of the list of Lancifoliums; next to this, and almost as beautiful, the new white variety, Præcox, and Rubrum, bright crimson and white. Some years since, a variety called Roseum was advertised, but the distinction between Rubrum and Roseum was not sufficiently marked to warrant this division. All Lilies may be planted in the autumn, but it is well, before hard frosts, to cover the surface with a little coarse manure, or leaves, as it prevents the throwing out of the bulbs by freezing and thawing.

THE STRAWBERRY.

If we were asked to select our favorite fruit, we fear it would be a long time before any satisfactory response would be made. In bringing the different kinds of fruits under review, as a fond mother her children, each, by its own inherent qualities, has a claim to our attachment, and secures a place for itself that can be filled by none of the others. Still, we are conscious that the Strawberry is, perhaps, linked with more pleasant associations and fond recollections than the rest. Beauty, excellence, and healthfulness are combined in the highest degree in this fruit; and it is no wonder that we fasten to it with our childish affections, nor lose our hold with age. Poets from the earlier times to the present have sung the praises of this luscious berry, but never had it so many admirers as now, when thousands of acres are devoted to its cultivation. Nothing could be more fitting than that one who, in writing "Play and Profit in My Garden," has stimulated us

hardened and grown rigid under the impress of vice, that but too correctly reveal the coarse and brutal nature within, often become wistful and tender over some simple flower or luscious fruit that recalls earlier and happier days. These are gifts which offend no prejudices, and inevitably suggest that which is good, sweet, wholesome and pure. For a moment, at least, and perhaps forever, they may lead stained and debased creatures to turn their faces heavenward. There are little suffering children also in the hospitals; there are exiles from country homes and country life in the city who have been swept down, not by evil, but the dark tides of disaster, poverty and disease, and to such it is a privilege as well as a pleasure to send gifts that will tend to revive hope and courage. That we may often avail ourselves of these gracious opportunities of giving the equivalent of a "cup of cold water," we should plant fruits and flowers in abundance."



WRONG METHODS OF PLANTING.

all to cultivate our gardens more for the mere pleasure of it, should, in his own happy style, treat of the romance, the sentiment, the difficulties and the labor connected with the cultivation of the Strawberry, which has been well done by Mr. ROE, in his new work, "Success with Small Fruits," an elegant volume of over three hundred pages, printed in the most beautiful manner, and replete with artistic as well as practical sketches. Our author treats not only of the Strawberry, but of the Raspberry, Currant and Gooseberry. We can do our readers no better service than to place before them some extracts from the pages of this valuable book:

"The Fruit and Flower Mission of New York is engaged in a beautiful and most useful charity. Into tenement houses and the hot, close wards of city hospitals, true sisters of mercy, of the one catholic church of love and kindness, carry the fragrant emblems of an Eden that was lost, but may be regained even by those who have wandered farthest from its beauty and purity. Men and women, with faces seemingly

Our author thinks the public should demand fine fruit, and they will then get a better article than is generally offered in the market.

"It is my impression that, within a few years, only those who are able to raise large, fine-flavored fruit will secure very profitable returns. Moreover, we are in a transition state in respect to varieties, and there are scores of new kinds just coming before the public, of which wonderful things are claimed.

"I doubt whether the ideal Strawberry, that shall concentrate every excellence within its one juicy sphere, ever will be discovered or originated. We shall always have to make a choice, as we do in friends, for their several good qualities and their power to please our individual tastes.

"There is, however, one perfect Strawberry in existence—the Strawberry of memory—the little wildlings that we gathered, perhaps, with those over whom the Wild Strawberry is now growing. We will admit no fault in it, and, although we may no longer seek for this favorite

fruit of our childhood, with the finest specimens of the garden before us, we sigh for those berries that grew on some far-off hill-side in years still farther away."

Passing by all that is said of the profits of small-fruit farming, and of the choice of soil and location, and the preparation and enriching of the soil, and of commercial and special fertilizers, we find the case made out very clearly that the time to set Strawberry plants is in



WRONG METHOD OF PLANTING.

autumn. The subject of varieties is critically discussed, and the proper methods of planting fully illustrated.

"We may secure good plants of the best varieties, but if we do not set them out properly, the chances are against our success, unless the weather is very favorable. So much depends on a right start in life, even in a Strawberry bed. There are no abstruse difficulties in properly imbedding a plant. One would think that, if a workman gave five minutes' thought and observation to the subject, he would know exactly how to do it. If one used his head as well as his hands, it would be perfectly obvious that a plant held, as in figure *e*, with its roots spread out so that the fresh, moist earth could come in contact with each fiber, would stand a far better chance than one set out by any of the other methods illustrated. Yet, in spite of all I can do or say, I have never been able to prevent very many of my plants from being set, as in figure *a*, too deeply, so that the crown and



THE PROPER METHOD.

tender leaves were covered and smothered with earth; or, as in figure *b*, not deeply enough, thus leaving the roots exposed. Many others bury the roots in a long, tangled bunch, as in figure *c*. If one would observe how a plant starts on its new career, he would see that the roots we put in the ground are little more than

a base of operations. All along their length, and at their ends, little white rootlets start, if the conditions are favorable, almost immediately. If the roots are huddled together, so that only a few outside ones are in contact with the life-giving soil, the conditions are, of course, most unfavorable. Again, many planters are guilty of the folly illustrated in figure *d*. They hastily scoop out a shallow hole, in which the roots, which should be down in the cool depths of the soil, curve like a half circle toward or to the very surface.

"In the most favorable weather of the early spring, a plant is almost certain to grow, no matter how greatly abused, but even then it does far better if treated properly, while at other seasons nature cannot be stupidly ignored. It is almost as easy to set out a plant correctly as



ROOT PRUNING.

otherwise. Let the excavation be made deep enough to put the roots, spread out like a fan, down their whole length into the soil. Hold the plant with the left hand, as in figure *e*. First, half fill the hole with fine rich earth with the right hand, and press it firmly against the roots; next, fill it evenly, and then, with the thumb and finger of both hands, put your whole weight on the soil on each side of the plant—as close to it as possible—and press until the crown or point from which the leaves start is just even with the surface. If you can pull the plant up again by the leaves, it is not firm enough in the ground.

"If the ground is so flat that water lies upon it in wet seasons, then throw it up into beds with a plow, thus giving the plants a broad, level surface on which to grow; for I think the best success will generally be obtained with

level culture, or as near an approach to it as possible. Always make it a point to plant in moist, freshly stirred earth. Never let the roots come in contact with dry, lumpy soil. Never

Trim carefully, taking off the blackened, shriveled ends. Sprinkle a couple of tablespoonfuls of fine bone meal immediately about the plant after setting, and then water it. If the weather

is warm, soak the ground and keep it moist until there is rain. Never let a plant falter or go back from lack of moisture.

"How often should one water? Often enough to keep the ground moist all the time, night and day. There is nothing mechanical in taking care of a young plant any more than in the care of a baby. Simply give it what it needs until it is able to take care of itself. The plant may



MATTED BED SYSTEM.

plant when the ground is wet and sticky, unless it be at the beginning of a rain-storm which bids fair to continue for some time. If sun or wind strikes land which has been recently stirred while it is too wet, the hardness of mortar results.

"In spring, it is best to shorten in the root one-third. This promotes a rapid growth of new rootlets, and therefore of the plants. In the summer and fall, the young plants are not so well furnished with roots, and usually it is best to leave them uncut.

require a little watching and attention for a few days in warm weather. If an opportune storm comes, the question of growth is settled favorably at once; but if a 'dry spell' ensues, be vigilant. At nine o'clock A. M., even well-watered plants may begin to wilt, showing that they require shade, which may be supplied by inverted flower-pots, old berry-baskets, shingles or boards. A handful of weeds, grass, or even of dry earth, thrown on the crown of the plant in the morning, and removed by five P. M., is preferable to nothing.



NARROW ROW AND HILL SYSTEMS

"It often happens that during long transportation the roots become sour, black, and even a little moldy. In this case, wash them in clean water from which the chill has been taken.

"There are three well-known systems of cultivation, each of which has its advantages and disadvantages. The first is termed the 'matted bed system.' Under this plan the ground be-

tween the rows is cultivated and kept clean during the spring and early summer. As soon, however, as the new runners begin to push out vigorously, cultivation ceases, or else, with the more thorough, the cultivator is narrowed down till it stirs scarcely more than a foot of surface, care being taken to go up one row and down another, so as always to draw the runners one way. This prevents them from being tangled up and broken off. By winter, the entire ground is covered with plants, which are protected, as will be explained further on. In the spring, the coarsest of the covering is raked off, and between the rows is dug a space about a foot or eighteen inches wide, which serves as a path for the pickers. This path is often quickly and cheaply made by throwing two light fur-

"In direct contrast with the above is the 'hill system.' This, in brief, may be suggested by saying that the Strawberry plants are set out three feet—more or less—apart, and treated like hills of Corn, with the exception that the ground is kept level, or should be. They are often so arranged that the cultivator can pass between them each way, thus obviating nearly all necessity for hand work. When carried out to such an extent, I consider this plan more objectionable than the former, especially at the north. In the first place, when the plants are so distant from each other, much of the ground is left unoccupied and unproductive. In the second place, the fruit grower is at the mercy of the Strawberry's worst enemy, the *Lachnosterna*, or white grub. Few fields in our region



THREE ROWS, ILLUSTRATING EARLY SPRING WORK.

rows together with a Corn plow. Under this system, the first crop is usually the best, and in strong lands adapted to Grasses the beds often become so foul that it does not pay to leave them to bear a second year. If so, they are plowed under as soon as the fruit has been gathered. More often two crops are taken, and then the land is put in some other crops for a year or two before being planted with Strawberries again. This rude, inexpensive system is perhaps more followed than any other. It is best adapted to light soils and cheap lands. Where an abundance of cool fertilizers has been used, or the ground has been generously prepared with green crops, plowed under, the yield is often large and profitable. But as often it is quite the reverse, especially if the season proves dry and hot. Usually, plants sodded together cannot mature fine fruit, especially after they have exhausted half their vitality in running.

are wholly free from them, and a few of the voracious pests would leave the ground bare, for they devour the roots all summer long. In the third place, where so much of the ground is unoccupied, the labor of mulching, so that the soil can be kept moist and the fruit clean, is very great.

"In small garden-plots, when the plants can be set only two feet apart each way, the results of this system are often most admirable. The entire spaces between them can be kept mellow and loose, and therefore moist. There is room to dig out and eradicate the roots of the worst weeds. By frequently raking the ground over, the annual weeds do not get a chance to start. In the rich soil, the plants make great, bushy crowns that nearly touch each other, and as they begin to blossom, the whole space between them can be mulched with straw, grass, etc. The runners can easily be cut away when the

plants are thus isolated. Where there are not many white grubs in the soil, the hill system is well adapted to meet garden culture, and the result, in a prolonged season of large, beautiful fruit, will be most satisfactory. Moreover, the berries, being exposed on all sides to the sun, will be of the best flavor.

"In the south, the hill system is the only one that can be adopted to advantage. There the plants are set in the summer and autumn, and the crop is taken from them the next spring. Therefore each plant must be kept from running, and be stimulated to do its best within a given space of time. In the south, however, the plants are set but one foot apart in the rows, and thus little space is lost.

"I am satisfied that the method best adapted to our eastern and western conditions is what is termed the 'narrow row system,' believing that it will give the greatest amount of fine fruit with the least degree of trouble and expense. The plants are set one foot from each other in line, and not allowed to make runners. In good soil, they will touch each other after one year's growth, and make a continuous bushy row. The spaces between the rows may be two and a half to three feet. Through these spaces the cultivator can be run as often as you please, and the ground can thus be kept clean, mellow and moist.

"I have now reached a point at which I differ from most horticultural writers. As a rule, it is advised that there be no spring cultivation of bearing plants. It has been said that merely pushing the winter mulch aside sufficiently to let the new growth come through is all that is needed. I admit that the results are often satisfactory under this method, especially if there has been deep, thorough culture in the fall, and if the mulch between and around the plants is very abundant. At the same time, I have so often seen unsatisfactory results that I take a decided stand in favor of spring cultivation, if done properly and sufficiently early. I think my reasons will commend themselves to practical men. Even where the soil has been left mellow by fall cultivation, the beating rains and the weight of melting snows pack the earth. All loamy lands settle and tend to grow hard after the frost leaves it. While the mulch checks this tendency, it cannot wholly prevent it. As a matter of fact, the spaces between the rows are seldom thoroughly loosened late in the fall. The mulch too often is scattered over a comparatively hard surface, which by the following June has become so solid as to suffer disastrously from drought in the blossoming and bearing season. I have seen well-mulched fields with their plants faltering and wilting, un-

able to mature the crop because the ground had become so hard that an ordinary shower could make but little impression. Moreover, even if kept moist by the mulch, land long shielded from sun and air tends to become sour, heavy and devoid of that life which gives vitality and vigor to the plant. The winter mulch need not be laboriously raked from the garden-bed or field, and then carted back again. Begin on one side of a plantation and rake toward the other, until three or four rows and the spaces between them are bare; then fork the spaces or run the cultivator—often the subsoil plow—deeply through them, and then immediately, before the moist, newly made surface dries, rake the winter mulch back into its place as a summer mulch. Then take another strip and treat it in like manner, until the generous impulse of spring air and sunshine has been given to the soil of the entire plantation.

"The cut, giving a section of my specimen bed, shows one row still under its winter covering, one cultivated and ready for its summer mulch, and the third row with this applied, and the plants ready for fruiting. A liberal coat of fine compost was forked in also at the same time, and the resulting crop was enormous. This spring cultivation should be done early—as soon as possible after the ground is dry enough to work.

"A liberal summer mulch under and around the plants not only keeps the fruit clean, but renders a watering much more lasting, by shielding the soil from the sun. Never sprinkle the plants a little in dry weather. If you water at all, soak the ground and keep it moist all the time till the crop matures.

"When prize berries are sought, enormous fruit can be obtained by the use of liquid manure, but it should be applied with skill and judgment, or else its very strength may dwarf the plants. Horse manure composted with muck, vegetable mold, wood ashes, bone meal, and, best of all, the product of the cow-stable, if thoroughly decayed and incorporated with the soil, will probably give the largest Strawberries that can be grown, if steady moisture, but not wetness, is maintained.

"Do not disturb the roots of a plant during a dry period. Many advise a liberal manuring after the fruit is gathered. This is the English method, and is all right in their humid climate, but dangerous in our lands of hot suns and long droughts. Dark-colored fertilizers absorb and intensify the heat. A sprinkling of bone-dust can be used to advantage as a summer stimulant, and stronger manures, containing a larger per cent. of nitrogen, can be applied just before the late fall rains."



STRAIGHT LINES AND CURVES

"What is the matter with this sleeve-cuff? See how stiff and queer it looks," said my invalid friend, Miss J., as she held up an arm and displayed some work fresh from a dressmaker.

"The outlines are two straight and stiff," was the answer; "and it is fastened too closely to the sleeve with its buttons and blind stitches. Instead of the shape it is (figure 1), suppose



you were to detach it, double it in half, and with two strokes of the scissors shape it like this (figure 2.)"

Thereupon followed a train of thought.

Some of the ancients, in their ideal world, peopled each tree with a presiding genius. What if the graceful Wild Locust just outside the gate were to use its thorns for pinning fast its drapery of leaves to the twigs, so that never a flutter should betray careless oversight, and its mistress should always find things snug and tidy!

What if the graceful tendrils of the Grape-vine were only used to bind each leaf closely to the branches in an effort to keep things looking trim and neat, instead of laying hold with their spiral clasp to the nearest support until the matured stems can uphold themselves!

What if the butterfly, when tired of flitting, should each time bind up its wings with its long antennæ, instead of poisoning like a palpitating blossom to delight the eyes of beholders!

What if we should awaken some morning to find everything in nature fashioned upon this principle! Surely Mr. VICK's first business would be to take his engraver and the other artists—whoever they may be—to the nearest lunatic asylum. As for himself and the rest of us—well, it is likely we should become pos-

sessed with a mania to muss up things generally. It is an axiom that nature abhors a vacuum. Is it not almost as true that she abhors straight lines, except where strength and power are to be secured?

The body of a tree is a straight line until strength of position is attained; then away go the rambling branches.

The lightning deals its destructive power with the straightest of shafts; and in its zig-zag course the sharpest of angles is described. And, singular to observe, the construction of the swift and terrible saw which slices into the hardest timber embodies those same acute angles. The arrow, the spear and the javelin must be straight to be effective.

But in contradistinction to the sharp, straight lines of the lightning, we have in those self-same heavens the great, grand curve of the rainbow. A majestic arch that needs no keystone to support it! As we gaze, its bars of luminous color seem to have caught their resplendent hues from the very walls of the Celestial City!

It seems that all the gentlest forces of nature revel in undulating lines and serpentine ways; and whether we walk blind or no, the similitudes of grace and tender shapeliness are ever before us. The delicate veins in the petals of a blossom and the coarser ones in every green leaf are, doubtless, to each respective part, what the arteries and veins are in the animal world, and, like these, go meandering through their allotted spaces in wavy lines, permeating the entire substance. In the leaf the largest veins often seem a continuation of the stem, and as heretofore suggested are straight to give strength to the fragile construction, while between, and connecting all, wander the finer veins, making a net-work of the whole, which renders so beautiful the "phantom bouquet."

The trickling of water over the softened soil after a rain invariably follows this law of nature. It is curious to note the pathways that the pioneer rivulet makes for itself in the new territory, sending its gentle explorers in every direction, until the various channels look like

the frame work of a mammoth leaf. But should the gentle rivulet gather force, it then cuts its way in a straight line, never turning aside except for some obstacle. It has no time for dallying in by-ways to leave fantastic tracks behind it.

The most fragile of vines—those which must cling every moment of their existence to some support—push up stiff and straight through the obstructing soil; but, having overcome all impediments, their real nature is resumed.

The window near by is entirely covered between the sash and blinds with the partially blanched vines of the Trumpet Flower, making a most beautiful drapery. One adventurous branch has crept between the middle bars of the sash, and though it has been guided along the wall in the direction of a hanging picture, it accepts of no gentle leadership, but would seem to indicate by its undulating curves that it has been in doubt ever since its entrance whether



FLOWERS OF TRUMPET VINE.



FLOWER DIVIDED.

to drop to the floor or rise to the ceiling. Reaching from an adjoining window a cluster of buds and blossoms is secured. This is not a highly prized flower. Its straight, stiff corolla is a little coarse in construction, though at the end it mellow^s into outward curves as though to atone for an unpromising beginning. As we continue to look, a matured corolla drops from its calyx, leaving a long, sturdy pistil firmly attached to the capsule, and we conclude that an examination will prove an interesting study. Look inside this voiceless trumpet! Here we have something to compensate for its stiff outlines. See those stamens lying close against its inner walls—two pairs of them—with their two-lobed anthers meeting so exactly that you marvel to see, when you split open a large bud, that the pistil, with its broad labia, is pushing upward, directly between the seemingly united anthers. Is it thus that the future seed is fertilized before the flower has yet opened its curiously over-lapping lobes? If so, then why does

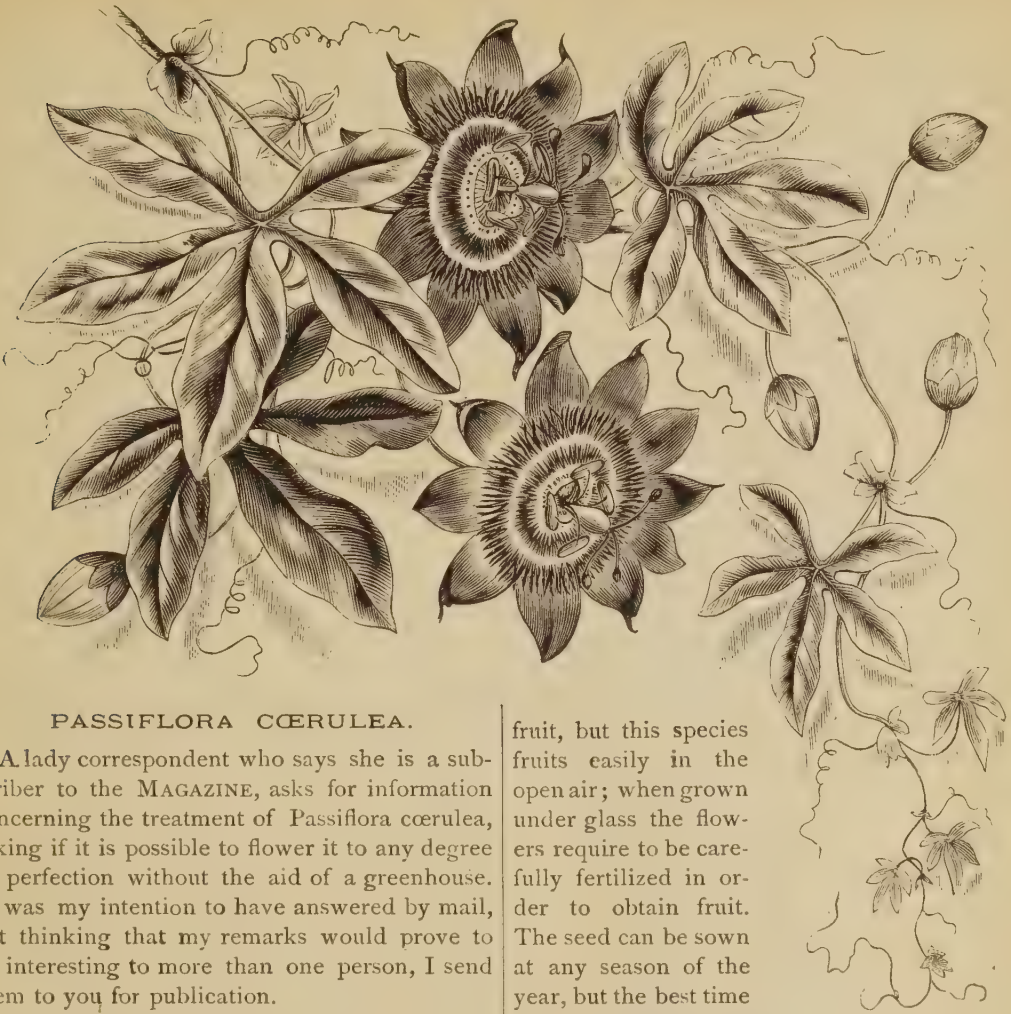
the long pistil attached to the capsule after the corolla has fallen stand, at a certain stage, with lips parted and turned back as though inviting the approach of the pollen-laden insect?

The chief beauty of this crimson trumpet is the beautiful curves outlined on its inner walls by the four stamens. Though more beautiful, you are reminded of the internal arrangement of the Snapdragon, and some other flowers whose stamens are hidden away in a circular corolla; and you fall to reflecting that since nothing in nature comes by chance, there must be a reason why these two sets of stamens rise in graceful curves to join their anthers in pairs. This admitted, then you conclude that the abortive fifth stamen, with its half inch so visible—and which holds good the numerical proportion—is suppressed because it would have no dual self with which to affiliate. Where is the writer of those charming papers on "Botany for Little Folks?" O, the mysteries of the floral world! Who can fathom them?

Each of these great clusters of bud and bloom form a little world whereon a variety of flies, bees and ants seem to revel in plenteousness. But of what nature the attraction consists is not so evident. An enemy, however, appears at intervals in the form of a bird with brown and dull-yellow plumage—a new-comer here, and having failed to drop his card we cannot name him. He feeds industriously on the denizens of the trumpet-world in the top of the old Pear tree, where the ambitious vine throws out its trumpets almost into the upper window; but never a tocsin stirs their silent throats to waken the sleepers in the early morn. But his birdship is there for his breakfast, and as we follow him to his retreat we find that, like his predecessors, he eschews straight lines for the walls of his domicile, and that his nest is perfectly round, although its beginnings were of stiff, straight straws and twigs. Strange perversity! How much easier to have made it three-cornered! And then such facilities as there would have been for corner cupboards, with their ample spaces for storage!

But what a chase a simple sleeve-cuff can take one! Really, there is room for suspicion that the sudden transition from one subject to another has not been marked by the smoothest of curves, but that some sharp angles have been outlined without the plea of "strength" or "power" to excuse them.—MRS. M. B. B., "*Retreat.*"

YUCCAS.—My *Yucca gloriosa* is now truly glorious. Say to the people of the north that this, though wonderfully tropical in appearance, is perfectly hardy in Central New York.—E. N.



PASSIFLORA CŒRULEA.

A lady correspondent who says she is a subscriber to the *MAGAZINE*, asks for information concerning the treatment of *Passiflora cœrulea*, asking if it is possible to flower it to any degree of perfection without the aid of a greenhouse. It was my intention to have answered by mail, but thinking that my remarks would prove to be interesting to more than one person, I send them to you for publication.

The *P. cœrulea* is a most magnificent woody climber, climbing by means of tendrils, with palmately five-parted leaves and, as it is one of our old standard varieties, it is much cultivated and admired, but it is not as extensively known as it ought to be. It is a native of Peru and Brazil, and was first carried from Brazil to Europe in 1699. In its native country it attains a length of over sixty feet, and in cultivation a growth of thirty feet, in a single season, is not an uncommon circumstance.

The flowers are interesting and beautiful, and of the most remarkable description, being about two inches in diameter, of a light blue color outside and purple and white within. They have a faint scent, but unfortunately they continue only for one day. As they are produced in the greatest abundance, however, and in succession during the summer months, this one defect is hardly worth more than a passing notice. The fruit is egg-shaped, and of the size and color of a Mogul Plum, the yellow skin enclosing a rather sweetish but disagreeably tasting pulp and black seeds. Some of the *Passifloras* are rather shy at setting their

fruit, but this species fruits easily in the open air; when grown under glass the flowers require to be carefully fertilized in order to obtain fruit. The seed can be sown at any season of the year, but the best time is from April to July. Sow in a well-drained

pan of light soil; place the seed on their edge, and not on their sides, as, if placed on their sides, they are liable to rot, and, besides, they do not vegetate so freely or rapidly. Cover slightly with light sandy soil, and keep moist. When the plants are up shade them from bright sunshine, and, as soon as they are strong enough to handle, pot them off into four-inch pots, using rich potting soil; attend to them carefully until they take hold of the soil. When they are about six inches high, pinch back to three or four leaves, so as to obtain strong and stocky plants. As soon as the roots reach the sides of the pot, shift the plants into larger pots, or plant them in a well-prepared border. To flower this *Passiflora* to perfection in the open air, prepare the place where it is to stand by digging the soil to the depth of two feet, at the same time working in a good portion of well-rotted stable manure; set out a good strong plant about April 20th, and attend carefully to training. Tie up all shoots as often as necessary, and as soon as dry

weather sets in, give a good mulching of coarse stable manure. A bucket or two of water in which two ounces of guano has been dissolved is of great benefit to them, if applied once a week. As this *Passiflora* is nearly hardy, it can be planted out about April 15th, and taken up about October 20th. The plant should be taken up as carefully as possible, and potted in a pot or box; give a good watering so as to settle the soil around the roots, and trim off all weak or unripened wood; place the plant for the winter under the shelf in the greenhouse in a dry and cool place. It will keep very well in a dry, light cellar, if not allowed to become too wet or dry. This treatment suits this species of *Passiflora* well, as it remains dormant during the winter months, and commences to grow in April, and flowers from May to October. If cultivated as a greenhouse climber, it may be planted in a well-prepared border, or it can be grown in large pots, boxes or tubs, if it is repotted every season when it commences to grow. When the flowering season is over, the shoots should be cut back—the weak shoots to three eyes, and the stronger ones to eight or ten eyes.

This *Passiflora* can also be propagated from cuttings of the half-ripened wood, and, as it suckers freely, the suckers, if carefully taken off and properly treated, will soon form fine plants. On account of its robust, healthy growth, it forms a most desirable stock on which to graft the more delicate growing varieties, and it is often used for such purposes.

The genus, *Passiflora*, has been so-named on account of its being supposed to represent in its floral organs the passion of our Lord Jesus Christ. If grown as advised, this Passion Flower will be found to be a desirable addition to our list of climbers for an arbor, or for lattice work, but it cannot be grown satisfactorily on a small, low trellis.—CHARLES E. PARNELL, *Queens, L. I.*

A GARDEN JOURNAL.

March 28, 1880.—Forenoon very warm; strong wind from the southwest; heavy showers in the afternoon; cooler towards evening. No new arrivals among the birds; saw snowbirds again to-day, also many robins, several song-sparrows and our own bewitched bluebird, with her mate this time. She is at her old tricks again, dashing against the closed windows. There are two small windows open in the garret, but she does not go near them now, although before they were opened she attempted to go through the glass. I put up a box to-day inside one of the garret windows, and hope she may take a fancy to it and settle down. Her mate is very shy, but she seems half tame.

She sat on one of the trees in the garden this morning, hunting worms, but a few feet away from me. She glanced at me now and then, but went on with her business until her mate called her away. Though she hunts on trees, her food is taken from the ground. It is very amusing to watch her perched on a lower limb, turning her head from side to side, with her eyes fixed on the ground. She has a very thoughtful expression, and one might take her for a feathered philosopher—but there! she sees a worm or a beetle in the grass, and darts upon it like a flash. I never knew her to miss her aim, and I have watched her by the half-hour. As soon as the prey is secured, she returns to the tree, or another near by. She never remains long on the ground. Her habits in this respect are very different from those of the robins and song-sparrows; they are on the ground all the time—indeed, the sparrows almost live on the earth. The bluebird's color is so brilliant that it would not be safe on the ground. That is doubtless the reason it seeks the tree coverts. The plumage of the male is much brighter than that of the female; indeed, the latter looks quite homely beside her handsome mate.

March 29.—Very brilliant day; cold wind from the north, else it would be pleasant. The snowbirds are not all gone yet. There were several in the garden to-day; also a number of American goldfinches and many robins. The latter are more numerous than bluebirds.

March 30.—Cool and cloudy, with rain in the afternoon. The bluebird tried to get in at my bed-room window this morning. I really feel concerned for the poor thing, and wish she could find a building site to suit her. The pair are in the garden this evening, sitting in the wild Cherry tree quite close to the house.

April 1.—Partly cloudy; cold wind; not as pleasant. The bluebirds still haunt the garden, and the female makes dashes at the windows occasionally. She does not seem to have observed the box above the door, or else she does not like it. The Crocuses have been in bloom a month; the yellow are the most durable. Planted Adonis, Nemophila and Nasturtiums in the open ground. Saw a red-winged blackbird. Two phoebe-birds in the garden this evening catching flies. The Peach buds show the pink. Dandelions thick on sunny slopes; they look lovely among the fresh, green grass. Wild Violets in bloom in the woods, and Pansies in the garden.

April 10.—Warm and rainy; heavy shower in the afternoon. Fine growing weather—one can almost see the things grow. The Nemophila insignis in the seed-bed has its second leaves;

they are so pretty, not unlike Oak leaves. It will soon be large enough to transplant; then shall sow Pansies in its place. As my seed-bed is full, shall plant Drummond Phlox in the open ground as soon as the rain is over. In digging over the Verbena bed, saw the brown and white worm that I first noticed last summer, it gets into stalks of plants and eats the pith like the wire worm, but it also eats green stuff. Have seen many small leaden-colored grubs in heaps. They look like cut-worms; if so, they are going to be very plentiful this year. These small creatures seem hardly awake yet. I have thought of keeping some of them in earth in the cellar just to see what they would come to.

April 11.—Cool and cloudy. The Sweet Peas are coming up, and the Dwarf Iris is in bloom. The wild blue Violets are out thick, and at a little distance look like a blue mist settled on the grass. The air is laden with the perfume of blossoms; the Peach and early Cherry are in full bloom. The Juneberry is in blossom, too; it is a very pure white, and looks like a spectre among the skeleton forest trees, most of which are still bare and leafless. A pair of red-headed chipping birds sat on a tree for a few moments this evening, with one of the song-sparrows, and the song sparrow looked quite large beside them; they are dainty little creatures. I first observed them in the garden about ten days ago. Saw a number of small yellow butterflies to-day; also, one brown one, with a light border to its wings. The song-sparrows come every evening to the flower-bed under my window for bread-crumbs. I think the bluebird has found a nesting place, for she does not try to get in at the windows any more, and seldom comes in the garden. I am sorry that she could not make up her mind to occupy the house that I offered her rent free.

April 13.—A decidedly disagreeable day; raging wind and bright sun. A heartless day, like some people that I know; it affects my nervous system and makes me irritable and wretched. Fortunately, the flowers are less sensitive to the influence of the skies, and grow very fast. Most of the fruit trees are in bloom, and the grass on the lawn is high enough to cut. The perennials shoot up several inches, it seems to me, in one night; yet the weather is rather cool. The cat nearly caught one of the sparrows to-day; I never knew him to molest them before. Cut the first Asparagus this evening.—E. A. M., *Green Tree, Pa.*

A GARDEN NOTE.—The pot and kettle craze of last year has died out; they are no longer seen on our lawns.—H., *Cleveland, O.*

LILIUM TENUIFOLIUM.

All Lilies are beautiful. No family has more peculiar traits in harmony with each other than the plants comprising this genus. The *Auratum*, stately and grand; *Tigrinum florepleno*, massive and eccentric; *Excelsum*, noble with its crown of glory, and *Speciosum*, with its extreme beauty, should each have a place in our gardens, for there is nothing else in the floral world that will fill their places.

Perhaps no member of the Lily family has so many claims upon our admiration as the scarce and brilliant *Lilium tenuifolium*. It is offered in but few catalogues, owing to the fact



that, like other precious things, it has been almost impossible to get them in quantity, consequently the price has been high, from one to four dollars each, according to the supply; and yet, their beauty is of such a character, and the plant such a hardy, easy-growing, permanent ornament, that they have always commanded the prices at which they were offered. A correspondent, in writing of its merits, calls it a "gem of gems," thus recognizing its just claims to the first place in the one little spot in every garden that is set apart for the choicest of our floral treasures. It is a native of Siberia, consequently it is perfectly hardy in this latitude, and, like all other plants from that far-off country, flowers early, beginning to bloom about the last of May. In shape the bulb is about twice as long as its breadth. The only Lily known to have a bulb of this shape is the Indian Lily, *L. polyphyllum*. The bulbs are about an inch in diameter. From the center of the bulb

shoots up a strong, wiry stalk that is clothed with bright green, grass-shaped leaves, giving it an exceedingly graceful appearance. This Lily grows about two feet, exceptionally three feet, high, bearing from four to seven, sometimes ten, of its clear, brilliant, scarlet Martagon-shaped flowers, which, when once seen, are never forgotten. I know of no Lily that requires less care, or of none which will return so much glittering beauty. Plenty of sand in a dry soil seems to be all it needs to do its best. Being an early-flowering Lily, it does best when planted in autumn, and should be put down about five inches.

I wish to call attention to the fact that there is in market a spurious *L. tenuifolium* which may be had for a less price. I should say that it was a hybrid between *L. callosum* and *L. pomponium*, and though it is a fair Lily of a red color, it is not handsome enough to be grown in the same bed with *L. tenuifolium*, which is a true species.—E. HUFTELEN, *Le-Roy, N. Y.*

HOW JOHN CHINAMAN GARDENS.

The Chinese have always been regarded in some respects as the best farmers in the world. And as we have had excellent facilities for noting the daily labors, for the past three years, of one Ah Yut Sing, a genuine pig-tail from the Celestial Kingdom, we will give to the readers of your valuable MAGAZINE the benefit of our close observations of the manner in which Mr. Ah Yut Sing raised more choice vegetables in one season without any garden than a great many citizens raise when they have a choice spot and all the conveniences. But before we begin to tell them of his exploits and success as a gardener, we must tell them who Mr. Ah Yut Sing is and whence he came. The first that was known or seen of him was when he was tramping the railroad track in the spring of 1877, and he stopped at a boarding-house in a half-famished condition and called for something to eat. His strange manner, peculiar dress and many strange ways excited the young folks and street gamins, and his extreme poverty stimulated some of the citizens to enquire his occupation, where he came from, where he was going, and if he was aware of his condition. He soon muttered in half English, half signs, &c., that he came from New Orleans; that he was en route for New York; that his occupation was that of a laundryman; that he had sailed from China some six months ago; that he was looking for a job of washing clothes, and last, but not least, he was a tramp of the first water. He was cared for a day or so until he regained his strength, and then a chance

was given him to prove his skill as a laundryman. We need not tell our readers that he made a good impression in this line at once, and the manner in which he washed, ironed and starched the most common wearing apparel to the finest and most delicate fabric, soon won for Ah Yut Sing a wonderful reputation in this line. In town there were no less than seventy-five male students, and one hundred and twenty females attending the female college, and our town was a good field for a laundry. So this was a "boom" for Ah Yut Sing. He was immediately employed at fair wages for twelve months. He was faithful to his contract for one month only, however. The wages he received for one month's service was a "big bonanza" to him, and he immediately rented a small, low-framed, wooden structure that had been used as a fruit stand, and opened up a business for himself. His sign read thus: "Ah Yut Sing, Washing and Cleaning." Right here he laid the foundation for his fortune as a washer and market gardener.

The size of this building was 16x16 feet, and the lot that was enclosed and attached and fronted on the street was 27x42 feet, actual measurement. Ah Yut Sing would engage in washing, ironing, &c., about eight hours steadily during the day, Sundays excepted, and then he would engage in his garden the remainder of the day, and did most of his work at night. We had excellent facilities for observing his operations from a third story window near by, and with the aid of a tourist's glass we made a good view of his interesting process of planting seed, cultivating, watering and nursing his plants. His first step was to spade up the land and then preparing his seed to plant. Some of our readers may not know that, as a general thing, the Chinese race are a very unsocial set of beings, and all the business that they transact, or work they do in America, is done apparently in a private way, and all you have to say to them, or questions to ask, seems distasteful to their customs. Their honesty and integrity are at a tremendous discount, and all you can see or learn of them is by observation, and not by conversation. After Ah Yut Sing had procured his seed of Cabbage, Tomato, Melon, Cucumber, &c., he immediately began his process of preparing them for the soil. His experiments with each of the above-named seed were truly interesting. For one week before he planted them in his carefully prepared mellow soil, he subjected them to a curious process of soaking and bathing in a liquid made with water and the excrements from the fowl house. He would carefully separate each variety of seed into parcels and suspend them in a glass vessel (candy

jar) that was half-filled with this liquid, and pains would be taken not to let the seed touch the liquid, and he would let them remain for six or seven days, when they would be swelled to twice or three times their usual size; then they were planted. His vines of Cucumbers, Tomatoes and Irish Potatoes seemed to be his pets, and were planted under the eaves of the house, where the rain water would have fallen upon them if the wily Celestial had permitted it, but such was not the case. He had constructed a tin gutter, made of thrown-away oyster cans, which conveyed the water to barrels, where he wanted it for laundry use, and not to fall upon his bed of vines. But this tin gutter served a double purpose; when the vines had begun to run, small holes were punctured in the tin gutter and a mixture of water and fowl dung was placed in the gutter, and a gradual dripping which descended into the midst of the vines made them grow like "wild-fire" and produce fruit abundantly. A trellis was made of twigs for the vines to climb upon, and by this process the amount of Tomatoes, Cucumbers, Squashes and Melons that were grown was miraculous. The vines were the largest, the healthiest and most fruitful of all we ever saw, and all on such a small space. His vegetables commanded a premium in the market, and were noted for their size, flavor and freshness. But Ah Yut Sing was too economical to eat the fruit of his own labor; he would sell his choice vegetables to the epicures at a nice figure, and buy the stale unsold lots that were offered at a discount in the market.

His manner of growing Irish Potatoes was interesting. He bought only about three dozen Potatoes for seed, and he used them for soup as well as seed. He cut them to a single eye, then preserved the cores for soup, and placed the eyes in a basket to undergo a peculiar treatment before planting. He would bath them in liquid; then, while they were wet, he would coat each one over separately with powdered lime, and then planted them. As soon as the vines had obtained the height of six inches, they were carefully clipped off and transplanted, which made a second crop.

His method with the Cabbage was something novel. The seed was sown in drills, very thin, and no transplanting was done. The crop was thinned out to suit the soil, and they were handled with much care. A piece of tin 4x6 inches was placed on the west side of the young plant in the morning, and he let the tin plate remain until eleven o'clock in the day, when it was removed, and replaced on the east side of the plant at one o'clock. To get him to explain his motive for doing this was difficult. He

said the advantages of the tin plate being placed near the young plant were numerous; one was that it gave the plant light, and another, that it produced heat.

He was an expert at opium eating, and the price the druggists charged for opium by the ounce was too high for his finances; so he cultivated the Poppy to success, and prepared his own opium.

The starch he used was made by his own hands from Corn grown on the little spot of land. How he obtained the ingredients to make his own soap will show how dishonest he was. Mr. SCHEISLER had a pet pig of the white Chester breed, which he valued much. The pig was quite fat and familiar with every one. On one occasion the pig invaded the Chinaman's garden, but did no damage. Ah Sing prepared some poison for the harmless pig, and induced it to go into the garden the second time; it died from the effects of the poison in a few minutes. Then Ah Sing proposed to the owner to wash his liren for twelve months for the dead carcass, which was accepted, and the carcass was made into soap. He raised the Indigo plant, and made quantities of indigo for sale and for his own use in the laundry. He made a preparation of indigo and starch; when combined and placed on linen it put to flight all the efforts of any starch polish ever seen in this section.

His ideas of gardening attracted the attention of many, and one scientific farmer in particular became so interested in this Celestial heathen that he offered him the use of ten acres of land, free of all rent, that was well adapted to Rice, if he (Ah Sing) would cultivate it. But the Chinaman declined by saying the offer was too liberal—that it was only a trick to get him and his attention from his garden and laundry in order to rob the same. So the joke was then on Colonel L.—H. I. L., *Athens, Ga.*

FLOWER GARDEN.

What is there more charming in the natural world than a flower garden? What spot on earth contains so much that is really beautiful? Its walks, paths and avenues, with the clean, smoothly-shaven strip of greensward, so nicely arranged, are charming to the eye, but the flowers, in their almost unnumbered varieties and endlessly variegated colors, who can describe them? What tongue, pen or pencil has ever done it? Well did Jesus say, "Consider the Lillies of the field how they grow; they toil not, neither do they spin, and yet Solomon in all his glory was not arrayed like one of these." What glory of any earthly monarch exceeded

that of Solomon, and yet it could not match one of these flowers. They will stand for beauty unrivaled and alone, with all the splendor of courts and kingdoms of human art and skill.

Nearly every family can find a little space for flowers; if it is but a few feet square, it can contain many choice plants, but most can find a larger spot, while not a few have ground enough for an ordinary-sized flower garden. Many think the labor and care required on such a garden to keep it in proper order are too much—that they had better be given to worthier objects. Give it only the spare moments, and it will be well cared for. If it is a labor of love, it will receive the necessary attention, and nothing will be neglected in consequence.

Some, we have known, neglect the flowers altogether because, they say, "We cannot eat nor drink them." Suppose we can't, and does it necessarily follow that flowers should not be cultivated? Are we to live merely to eat and drink? What a strange, low view of life. If flowers are not designed especially for the taste—many of them may regale this—are their beauty and fragrance nothing? So far as it is possible, every sense and faculty should be supplied with what is agreeable, and will contribute to real pleasure, and we are sure that flowers perform an important mission in this work. Without these, there would be a sad lack in meeting all the demands for the highest enjoyment of life. Our Heavenly Father knew what we needed to make life what it should be, and hence, among the many other good things He has so wisely provided for us, has given us the beautiful flowers. How grateful we should be for such a gift?

Would that with every human habitation there were flowers! What enjoyment they would give! What blessings they would impart! What charms they would add to every department of life! How would they sweeten toil and care, and smooth many a hard and difficult spot in life's journey, and lift the thoughts to that world where flowers immortal bloom! Don't neglect the flower garden.—R. W. A.

A GLORIOUS CLIMATE.—A lady of Hermitage Landing, La., just about to leave "dear America to cross the villainous Atlantic for a visit to old home in Scotland," writes: "The Pearl Tuberose you kindly sent flower in greater beauty each succeeding year, for in this glorious climate we do not have to take them up. I have also a wealth of *Polyanthus Narcissus* that are lovely from January until March, and pure white *Colchicum*, which gives abundantly of its snowy blossoms all the fall and early winter."

WOMAN, BIRDS AND FLOWERS.

As VICK'S MAGAZINE is mainly a gem, and almost a gift, to the ladies of the land, it seems to me fitting that it should embrace and treat of birds along with flowers. If there is one thing more than another that the women of our land are more remiss in a thorough knowledge of, next to the flora of her native walks, it is, perhaps, the birds that sing in the trees. In the cities not as much interest might attach to birds as flowers, because they are not so commonly seen, but in the country and among the trees the birds are a constant source of varied thought that should not be overlooked in description and history. Only yesterday I happened in a "berry patch" with a lady reader of your MAGAZINE, when a shrill whistle of exquisite softness of delivery attracted our attention to a tree near by. The lady remarked, "He is whistling for the dog as plainly as a boy could." I asked her if she knew the color of that bird. She replied, "No; but I take it to be a Partridge." In less than a minute's time it repeated the whistle in the woods at a distance of some five hundred yards. I told her, if it had been a Partridge, we should have heard it fly up with a noise of wing, but that it was a Red bird, *Tanagra æstiva*, and, as we had one of these stuffed and under glass, she was surprised at her ignorance of its note. But even women of more leisure than they employ well are just as ignorant of our common birds from their whistled notes, or, in fact, from their appearance.

In this connection I feel no shame in calling the attention of the reader to a few birds I know by appearance, but not by name. Some ten years or more ago, a little bird of the habit and appearance of our domestic Wren, *Troglodytes*, only a dark streak back from the eyes, made its appearance and claimed our admiration by its many new tunes, played or whistled one after another, as a musician would play his tunes, with correct repetition of each note in place till he had played the air out; then he would give us a second, a third, and sometimes more, often varying, but the tunes were always true to note until another tune was in turn taken up. This bird is a little larger than our Wren, having a longer bill and tail, and longer limbed, but of the exact habit of the Wren, which seemed very jealous of the new usurper of his "hole in the wall," and bravely fought him out, though the former was with us in any open weather in winter, and made the earlier nest. One we call the Summer Wren, the other the Winter Wren, though their notes are as diverse as their habits are alike. The winter bird made a nest in the curry-comb box, where it raised five or six young birds, and now wears a new buff vest.—SIGMA.

GOURDS AND GRASSES.

I suppose, Mr. Editor, your readers, like myself, cultivate flowers and other interesting and beautiful things in nature for the pleasure they afford. Some seek pleasure in bright lawns and gorgeous beds, while others almost worship a beautiful Rose, and still others I know would not exchange the little Sweet Mignonette, or Violet, or Lily of the Valley for all the costly flowers that bloom in the conservatories of princes. I, too, have my fancy, and this runs in the way of curious things, and very often things that most people would not think worthy of culture. It is a great pleasure to pick up an odd thing that I can learn but little about and see what it comes to. It seems like a revelation; sometimes almost like a new creation. Latterly, I have given a good deal of attention to the culture of Gourds, and nothing I have ever cultivated has afforded me more pleasure; they are so curiously formed and so wonderfully diversified. Some are so near like Oranges in appearance that only by handling can the difference be told. Others look like different fruits, as the Apple, Pear, Gooseberry, &c., while a few assume the shape of bottles, dippers and clubs. No one who has not cultivated a good many can realize the appearance of my garden, surrounded by these climbers, every fence covered with the larger kinds, while a few trellises contain those of shorter growth and smaller fruit. I thought that perhaps a description of the Gourds I grew last summer might be interesting to your readers. I also amused myself with taking drawings, as fast as they matured, for my scrap-book, and send you copies. They may not be worth reproduction in your MAGAZINE, but of this you can best judge. My attention was first called to the Gourd family by an exhibition at a Horticultural Show in London about ten years since, where I saw perhaps the largest and handsomest collection ever got together. They were exhibited by some English seedsman, I believe, whose name I have forgotten.

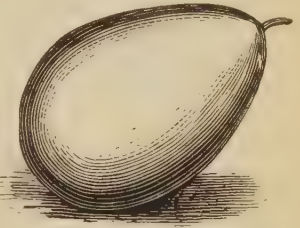
Hercules Club is one of the largest Gourds, in the form of a club, as its name indicates. I have the fruit now nearly three feet in length. When hanging on the trellis, or any other support, this Gourd looks singular enough, and persons at first will hardly believe that they grow upon the vine, but are merely hung about the vine for deception.



The Serpent Gourd is one of the most singular of the tribe, only about two inches in diameter, and several feet in length, curled in various forms, and no two alike, in the manner of a wriggling snake. It is so natural, as sometimes to alarm the children and give even older persons a start. They are, however, the most harmless of serpents, for they fortunately belong to the vegetable instead of the animal kingdom.



The Egg-formed is a pretty white egg, look perfectly natural, and about as large as a goose-egg. It is white, with a skin that is slightly glossy and smooth. I have heard that this fruit is eaten in some places like that of the common Egg-plant, but I have not tried it. Many of the varieties of Gourds, I have learned are eaten, when young, in some countries.



The Pear-formed Gourd is one of the most showy of the Gourds, and yet it is not large—about the size of a Pear. I had some specimens that were yellow, with cream-colored stripes; others were yellow on the top, while the base was of the darkest green—indeed, no two seemed to be marked exactly alike. I don't know whether there are several distinct varieties of the Pear Gourd or not, but the fruit of those of light color are always the smallest, while those with green at the base are the largest, some of them from six to seven inches in height.



The Bryonopsis laciniosa is one of the best of the small-fruited Gourds. The flowers are whitish, and look as though fringed, the leaves are elegant, and the fruit scarlet, striped with white. This is a favorite with me, and is, considering the bright color of the fruit, the rapid growth of the vine, and the character of the flowers, a very desirable plant.



A curious Gourd is the Bottle or Dipper Gourd, frequently, I believe, called the Calabash. Sometimes it has a straight handle, and in some places is used as a dipper. I have had them double, that is, large at both ends and small in the middle.

There is one large kind called Sugar Trough; but it does better South, I think, than with me, as it seldom ripens.

The Wild Cucumber, called by botanists *Echinocystis lobata*, is a wonderfully free-growing



climber, with Ivy-like leaves and small, spiny fruit. It grows at an astonishing rate, and if trained upon the side of a building or

fence, soon covers a very large surface with its slender branches and bright green foliage.

The Teasel Gourd, *Cucumis dipsaceus*, is an excellent climber, bearing spiny, yellowish fruit, resembling somewhat the Teasel, and this gives it its name. The flowers are white, somewhat fringed, and quite pretty. It is one of the best of the small fruited kinds,



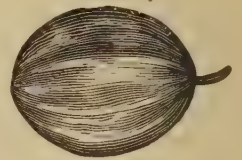
and, although slender in appearance, makes a very rapid growth, as, in fact, do most of the Gourds.

The Striped Apple has yellow fruit, striped and blotched with green. The plant is a free grower, the foliage—though not as handsome as some of the small fruited sorts, is very abundant, and makes a dense shade if trained over an open arbor

or summer house. I had one on a summer house made of simple trellis work, in a rather rude manner and at the most trifling cost, and yet no object in my garden attracted more attention, or gave more pleasure to my visitors or more comfort to myself.



The Gooseberry is a pretty little Gourd, and the fruit very nearly resembles a good-sized Gooseberry, such as you see in Europe, but seldom here. If it was only as good as the English Gooseberries I would grow plenty of them; but as it is, it is a pretty climbing ornamental plant, bearing plenty of fruit, which is good to look at only.



The Balsam Apple, *Momordica Balsamina*, bears singular fruit. It is somewhat Pear-shaped when young, but on ripening the lower part bursts open, exposing the seeds contained in the pulp. It is then bell-shaped, the outer part being orange and the inside scarlet. The fruit is very soft and tender and will scarcely bear handling. It is, however, the most curious, if not the most beautiful of all the small fruited Gourds.



A little knowledge of botany and a desire for further information, perhaps, led me to study and gather the Grasses, but one with more taste, no doubt, than her husband soon found a use for my specimens, and a use that I had little expected. They were arranged in wreaths and bouquets, and did good service in the winter time, especially about the holidays. The next year I thought best to obtain some more ornamental kinds, and for a year or two I have made a kind of hobby of the ornamental Grasses.

The most common and easily grown of all the Grasses, and quite a pretty one, is the annual, large Shaking Grass, *Briza maxima*. It is as easily grown as Timothy, or any other common Grass, blooms early, and its fine heads of spikelets, when cut and dried, are not surpassed by any other kind I am acquainted with. I have a large patch of this Grass, planted in rows ten or twelve inches apart, just far enough to keep clean with the hoe between the rows, and expect to produce a large quantity; not that I need so much, but Mrs. B. finds it very easy to give away, and it is not a costly luxury.



There is a small *Briza*, with dense clusters of spikelets, called *Briza geniculata*, and this is one of the very best of the small Grasses, useful alike for bouquet making in summer as well as for dried work in the winter. This Grass, and, in fact, all



others, I like to get in the ground pretty early, so as to have the benefit of the spring rains.

Bromus brizæformis, meaning a *Briza*-like *Bromus*, is another Shaking Grass, with long, slender spikelets; in other respects, it seems like the *Briza*. It is perennial, I think—at least, it does not flower until the second season—and has flowered twice with me, last year, and is



showing signs of flower now. It is a very good Grass. There is danger of perennial Grass being destroyed, for every hired man thinks Grass in the garden nothing but weeds, and is very apt to commit an assault upon it with the hoe.

Erianthus Ravennæ is the best of the large Grasses that I am acquainted with for a northern climate. I have grown it seven years, and never had a plant injured by the winter. A plant when mature forms a dense mass of graceful, slender, drooping leaves, commencing to



droop some three feet from the ground, which the points of the leaves almost touch. I have one bunch now that measures five feet across and four feet in height. Later in the summer the flower stems grow six or seven feet, bearing flowers from a foot to eighteen inches in length. The plant is just as handsome as the Pampas Grass, but the plumes are not half as large, nor so graceful. In the north, where the Pampas Grass is not hardy, we properly prize the *Erianthus*.

Feather Grass, or *Stipa pennata*, is the most graceful Grass in the world—like long, very slender feathers. A branch of this Grass is an ornament fit for any room in the world. These feathers are often a foot in length, the seed, which is shaped like a slender



Oat, being attached to the lower end. When ripe, the feathers are carried away by the wind, finally falling to the earth, which the sharp point of the seed penetrates, and the feather floats aloft like a banner, until it finally separates from the seed. This Grass is a perennial.

The Hare's Tail, *Lagurus ovatus*, is an excellent Grass, with a compact, bushy, hairy head about two inches in length, on long, slender stems. It is a very durable Grass, for I have kept it in Grass bouquets and other ornaments until the other kinds were disfigured by age and dust, when this was fit



for use again. Those who make a business of preparing these ornamental Grasses for market dye the *Lagurus* of many bright colors. Almost any of the Grasses are improved by bleaching. If placed in the sunshine for several days, they lose their brown color and become almost white.

Squirrel Tail Grass, or *Hordeum jubatum*, is another Grass with a feathery head, but this is more loose than the one previously described, with longer heads, and it does not appear to be as durable. I have only grown it one year, and there-



fore cannot speak from experience, only from appearance, but all Grasses to be durable must be gathered early, for it is their nature to separate as soon as out of flower and the seeds begin to ripen. This is the plan of nature for scattering the seed.

I hope these brief descriptions of a few of the best Gourds and Grasses may not be uninteresting to your readers, but furnish a little of the pleasure I have derived from their culture.—B.

THE LYCHNIS TRIBE.

You have several times suggested that it was a good thing for folks to have a floral hobby, some flower to pet. My observation teaches me that this is a very easy thing. Almost all who love and cultivate flowers have their favorites, and they certainly make the best of them. I have known persons to select from some unknown cause a very ordinary flower that no one seemed to care for, and grow them in such a way as to make every one wonder. I knew an old sea captain that filled his garden every year



with Balsams, and such a display of Balsams I never saw in any other place, although I have seen them in the gardens of the florists of London and Paris. You are right, urge the people to make a hobby of some flower, be it ever so simple. In some places in England, everybody knows, the mechanics make a hobby of the Gooseberry, and I have seen them grow in little cottage gardens as large as Peaches. In one district I visited in 1871, everybody seemed to have gone crazy on Onion growing. It was the hobby of the neighborhood, and such Onions I never expect to see again, as large as Turnips and several pounds in weight.

Several years since I was traveling from Port Hope to Rice Lake, in Canada, taking a little summer recreation, and stopped at the farmhouse of an English gentleman, for a night, midway between the two places, and in a well-kept little flower garden I saw and was pleased with a very nice collection of *Lychnis*. I was gratified with the display, and thought for a year or two, at least, I would give special attention to this flower, and with your permission will give the result.

The *Lychnis Chalcedonica* I have had three years. It flowered late the first summer, and the plants were not very strong. Every year since they have grown without any special care, except culture in a rich soil, and I have plants now three feet in height, with masses of bright scarlet, white and salmon, and striped, star-shaped flowers. They are admirable for cutting for large bouquets, almost as handsome as the Sweet William. I think these flowers are twice the size usually seen.

The new varieties, such as *Fulgens*, *Haageana* and *Grandiflora gigantea* are, however, the largest and the most brilliant. The plants are not so tall as the others, being only from one to two feet, but the clusters of flowers are wonderful. I have had plenty of single flowers two inches in diameter, and the colors are all that can be desired. I send you a cluster of less than medium size, for the use of your artist, if you so elect, but the best are gone. I do not claim that the *Lychnis* will ever become the rival of the Rose, or a great many other flowers that I could name, but they have afforded me a great deal of pleasure, and I hope will do as much for many of your readers.

The flower I send you is from a plant of *L. Haageana*.—M. W.

THE WHITE LILIES.—The beautiful *Candidum* Lily, so fragrant and so snowy white, furnished us a feast of good things for several weeks, and I thought nothing could be more lovely. Much did I regret their early departure, about the first of July; but we were without white Lilies only for one week, for the *Longiflorums* began to flower the 5th of that month, and are now truly gorgeous, the trumpet-shaped flowers being six inches in length.—ELLEN.

WILD PLANTS.

MR. VICK:—Reading in your MAGAZINE that we were to have a midsummer treat, I thought, perhaps, I might contribute a morsel to the feast.

Monotropa uniflora, or Indian Pipe, is a beautiful wild flower, and is esteemed for its curious forruration. I send you a specimen. The plant is smooth, of a waxy white appearance, turning black in drying. It is found in



MONOTROPA UNIFLORA.

PYROLA ROTUNDIFOLIA.

dark and rich woods, and is considered a parasite, growing on roots or decomposing vegetable matter. It is furnished with bracts, or scales, in place of leaves.

I also send a specimen of *Pyrola rotundifolia*, a low and smooth perennial herb, with running subterranean shoots. It bears a cluster of round, evergreen root leaves, and a simple raceme of white, nodding, fragrant flowers, on an upright, scaly scape. It is found in sandy woods, near Canandaigua Lake. I hope these two specimens may interest some of your numerous readers.—A. B. S., *Canandaigua, N. Y.*

CHILDREN AND FLOWERS.

It is a rare thing to find a child who cares nothing for flowers. Most children take great delight in them. I remember when I was but a small child, and flowers were not so generally cultivated as now; how anxiously I would watch the buds on the only Rose-bush in our garden, and when the Pink would begin to show itself what delight I would feel. It is true the Roses were of the commonest kind, and yet few things could have interested my young mind so much. Then after I grew a little larger, and was permitted with other children to stray in our evening walks from the dusty city down a green lane where the Hawthorn trees were,

with what rapture we greeted a Wild Rose vine with its many flowers—the first of the single kind I had ever seen.

I remember, too, what a curiosity to me was the California Poppy, which would close its golden petals as if going to sleep as the day wore away; and the Morning Glories that went to sleep in the daytime; and the Four-O'clocks, that were such sleepy-heads they couldn't wake up till four in the afternoon. Oh, if there were no flowers, how much pleasure the little ones would lose!

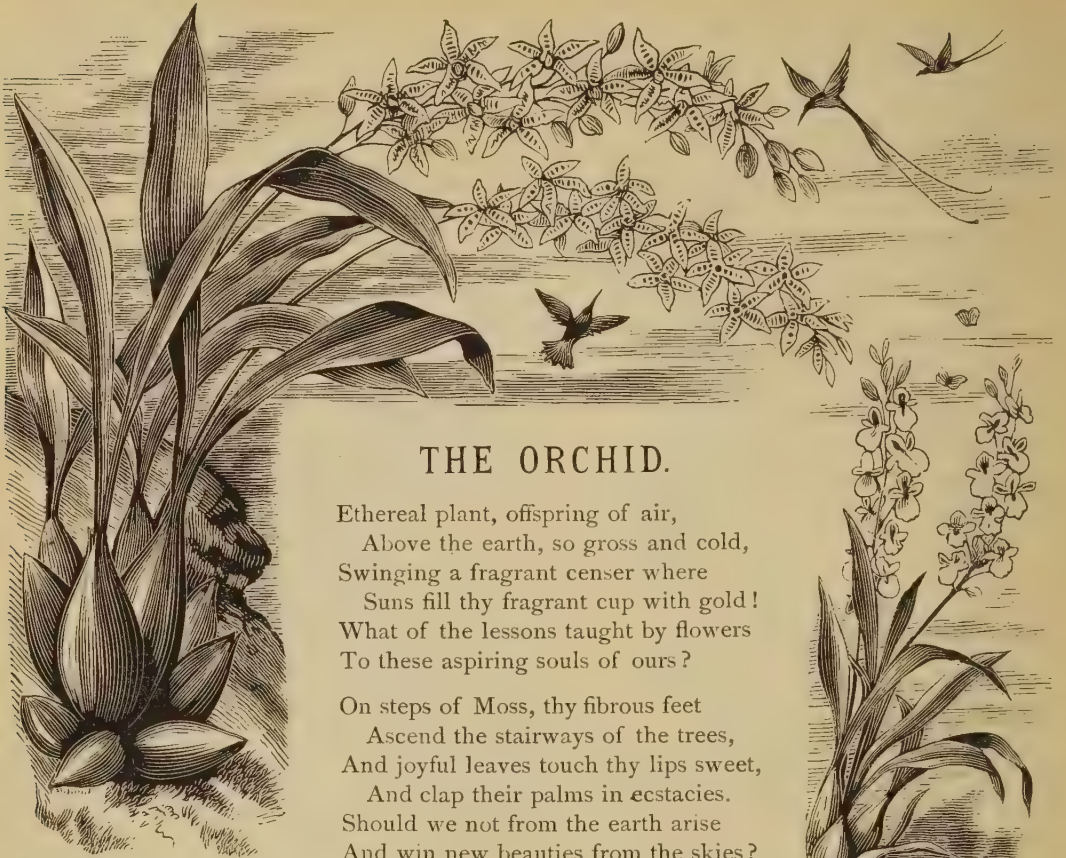
I know some wee girls who will leave their bought dollies and toys and play for hours with the blooms of Petunias and Pinks, and other bright flowers. It is true they keep some of the plants almost bare of blooms, but what pretty, harmless playthings, and what innocent delight they give! How sweetly the children amuse themselves in some shady spot, with their gaily dressed Petunia children around them.

If there is any room in your yard or garden, do let the children have a few plants that they may pluck the blooms from without fear of being reproved. You will be more than paid for the trouble in cultivating them by the bright faces and merry laughter of the little ones.—SIDNEY EMMETT.

BEET SUGAR.

The Sugar Beet industry in this State, although not in as excited a condition as last year, is believed to be firmer than ever. Most of the raisers have not been able to produce the roots at what is considered a fair paying price, but it has become evident that this is on account of unskillfulness, and that, as soon as the best methods of raising this crop are generally understood no farm crop will pay better. From the encouraging results in this new field of labor in Massachusetts, in Northern Michigan and in California, we are hopeful here and believe it will not be long before we shall be making sugar that will compete successfully in quality and price with that from the Sugar Cane. It appears from carefully made estimates that the crop of Beets to be worked up this year in all parts of country will amount to 90,000 tons, producing at least 8,000 tons of sugar.—B., *Portland, Me.*

WATER LILY AND MINNOWS.—A correspondent in writing to us about the planting of this spring says:—"The Water Lily I put into an old tub half filled with pond mud. The first leaves were eaten by some grub or fly; so, I procured some minnows, put them in the tub, and now the leaves are healthy, and some of the flower-buds are coming up."



THE ORCHID.

Ethereal plant, offspring of air,
 Above the earth, so gross and cold,
 Swinging a fragrant censer where
 Suns fill thy fragrant cup with gold!
 What of the lessons taught by flowers
 To these aspiring souls of ours?

On steps of Moss, thy fibrous feet
 Ascend the stairways of the trees,
 And joyful leaves touch thy lips sweet,
 And clap their palms in ecstasies.
 Should we not from the earth arise
 And win new beauties from the skies?

Nourished in the soft atmosphere,
 Thy Ganymede brings thee rain;
 And Heaven has blessings ever near
 For cups high-lifted without stain.
 Purer than nectar gods may sip,
 Must be the drink for Orchid's lip.

Within thy bosom, pure and fair,
 Sits in sweet innocence a dove,
 Whose message sweetens all the air,
 Whose mission fills the soul with love;
 And bird and blossom, both in one,
 Are fragrant jewels in the sun.

Suspended between earth and sky,
 Fit garland for an angel's lyre,
 We are assured that Heaven is nigh,
 Where swings in space thy urn of fire;
 Descending on the rainbow stair
 Some spirit must have left thee there.

How bounteous the hand Divine
 That scatters perfumes near and far,
 Making the summer wind like wine,
 And lighting among leaves a star
 To light and cheer the wanderer's path,
 And lift the soul above the earth.

—GEORGE W. BUNGAY.





ENGLISH GARDEN NOTES.

In the "Leaflets" of *Justicia*, in the *English Garden*, we notice a few observations that are as valuable to our readers as to those for whom they were originally written, and consequently here produce them.

A new use has been found for the bell-glass, "that of nursery propagation of many hardy shrubs and other plants. In Messrs. Waterer's nursery at Knap Hill it is now used abundantly, and does work that before had to be done in houses and frames. Cuttings are inserted thickly under it in the open air on shady or half-shady borders, and seem to root very freely; when struck, they are gradually inured to the air by tilting up the glass, and finally exposing them altogether, forming dense little circles of plants in the best possible condition for transplanting into lines. In a great nursery like Knap Hill it is a great aid in the simplifying of propagation, and in effecting that of many hardy subjects in the open ground instead of in propagating houses."

The massing of plants in groups is a great point with *Justicia*, and with many kinds of plants it is the only proper and effective mode of planting. "I was confirmed in my opinion about grouping hardy flowers by seeing quite a little colony of the handsome crimson American Cowslip, *Dodecatheon integrifolium*, in Mr. Lakin's garden at Chipping Norton, and none the less pleased to see that he propagates so fine a plant by putting little bits of the roots into pots; each piece soon buds up into a plant. In the same garden the new yellow Russian Primrose, *Primula luteola*, a distinct species, was quite as vigorous in the open air as any varieties of our native kinds can be. It is a thoroughly distinct kind, and promises to be of some value for our gardens, inasmuch as it flowers after our native kinds have passed away. In the garden in question the flower heads were very large, and from twelve to fifteen inches high. In fact, it is one of the freest of all the family to grow."

Our numerous friends that have sent us *Mer-*

tensia Virginica this spring, and others who have admired it without bringing it specially to our notice, will be pleased to see how well it is spoken of by our English friends. "In the same garden, and also at Sarsden, I was much pleased to see a large plant of the elegant *Mertensia* (or *Pulmonaria*) *Sibirica*. This reminds one closely of the beautiful old Virginian Lungwort, but seems to be a more regular and constant grower, and thoroughly hardy. The sea-green foliage is most graceful, and every long shoot is laden with sky-blue flowers. So perfect in form and grace are the foliage and shoots and blossoms, that a single shoot taken off and placed in a slender vase or glass is an object of great beauty. All must have this plant who care for the best hardy flowers, especially those fitted for cutting."

Here is a picturesque scene worthy of a painter's brush: "At Heythrop Hall I was charmed to see some banks near an old well clad with a mixture of Honeysuckle, Sweet Brier, and some free-growing Roses, well planted, and likely to form a beautiful feature in time. One sometimes has to find such beautiful plants in cottage gardens. While such mixtures are beautiful under the control of a careful gardener, perhaps the safer way, and not a less artistic one, is to have groups or colonies of Honeysuckle by itself, and so of the Sweet Brier and other wild Roses—the groups or climbers being formed in a natural and free manner, the advantage of this being that they may be left to themselves for many years. Some unions, however, are charming, and do not lead to disaster, such, for example, as the Honeysuckle and the Hawthorn, which indeed often marry and get on very well together without the intervention of man."

There is always something cheering at the sight of cultivated plants under any circumstances. Plant-culture is not a work or a pastime engaged in by one wholly discontented, or that is bent on evil; in itself it indicates, at least, resignation and, perhaps, contentment and hope, and an aspiration for good. "It is in-

teresting to notice how the love of flowers is illustrated in some of the lowest districts in London, under the saddest and most depressing conditions. In some of the narrow streets near Drury Lane, and in the worst tenements, outside the window of a wretched room may be seen pots of Southernwood, Moneywort, Lavender, and other plants that are cultivated under more happy conditions in English cottage gardens. Some of these I have seen cultivated by English people even in the wilds of Utah, or in still more inaccessible regions, where some poor English had gone to live in a mud or timber hut. The Southernwood is always a favorite plant in these cases, and has a place of honor in many a spot thousands of miles away from the old country."

The care now bestowed upon Tomato culture in England is very great. It would be somewhat amusing for our readers to see their efforts to produce this fruit which we raise with the greatest ease. Their plants are almost entirely raised in pots, in fruit or glass houses; in the south of England some are raised in the borders, and trained on walls where they receive the greatest amount of heat and can be easily protected when necessary. The Tomatoes are an important feature in the horticultural shows. "That was a very interesting display of Tomatoes at Kensington the other day, and there were very fine dishes. Large as the Stamfordian is, the brown scars are against it; though it is the biggest, it seemed a somewhat monstrous and coarse fruit. The most perfect dish, to my mind, was that from Blenheim of Hathaway's Excelsior, combining, as they did, every excellence, and just being right for use. Mr. CRUMP grows these in large pots, and places the pots on a bed of leaf-soil, into which the plants root freely. Mr. IGGULDEN'S Stamfordians were certainly fine; but if I had to prepare a Tomato salad for a party of epicures, give me Hathaway's, as shown from Blenheim. Mr. BATES tells me that some of these Tomatoes sent out from America are really French varieties re-christened, and that Hathaway is the French sort called Pomme Rouge." This opinion of Mr. BATES is very refreshing to us, who know to a certainty that what he states is not so. Our Tomato raisers have never needed to go to France for varieties, and the original history of Hathaway's Excelsior is, as our readers are well aware, as well known as those of the Early Rose Potato or the Brighton Grape. We have at different times tested many of the French varieties of Tomato, but have never found any of value in comparison with many of the best sorts of this country.

PETER HENDERSON, in an article recently

published, says "it must be admitted that in some phases of horticultural progress we are yet far behind Europe, particularly in the ornamentation of our public grounds. We have nothing to compare with the Battersea Park, London; the Jardin des Plantes, of Paris; or the Phoenix Park, Dublin." In regard to this Justicia remarks: "I fancy there must be a mistake here, as both the Central and Prospect Parks were as fine as anything I ever saw some years ago, and in point of design better than most places in Europe of the kind, except Richmond or the Phoenix Park, where naturally fine parks have not been destroyed by foolish plans. As to the Garden of Plants, a man of Mr. HENDERSON'S well-known experience and taste cannot regret that such a garden is not attached to the city of his choice. As a ground for bear-pits it is all very well, but as a beautiful garden it is really not much better than a tan-yard in Jersey City."

WILD FLOWERS FOR TABLE DECORATION.

Our native flowers and Grasses make extremely pretty table decorations, and, during the spring, summer and autumn months, we frequently employ plateaus with an undulating surface covered with green wood Mosses, which form an effective and natural groundwork for wild flowers. Some of the rough sedge-like Grasses, either taken up with roots or tied in bunches, are then introduced, and whatever kinds of wild flowers are in season are associated with them in irregular groups. Amongst these are the large Horse Daisies of our meadows, the Primroses and Bluebells of our woodlands, the aquatic plants that garnish our streams; and one plant, the Wild Carrot, that in Suffolk grows freely on dry banks and waste places, is so extremely pretty with its large flat heads of the most delicate little flowers, and looks so light and pretty, that I find it well worth cultivating, as I have not observed it growing wild in this part of Kent. Last season I sowed some seeds of this plant in good garden soil, and the size and quantity of bloom which they produced would convince any one that even common native plants are capable of responding to liberal culture and producing better results than ever they do in a state of nature. And, to show how little our native plants are known and appreciated, I may mention that although many visitors well versed in exotic plants admired the light aerial beauty of this native flower, it was unanimously set down as a new and rare plant until seen growing accompanied by its well-known foliage, when it was at once recognized.—J. G., in *The Garden*.

VERBENAS FROM SEED.

The peculiar pleasure derived from raising seedlings—the hopes and uncertainties that are inseparable from it—the upspringing in glory of some forms of satisfying beauty—or the appearance of others in gross and unworthy characters, need not be touched on in this relation. It is an occupation full of subtle satisfaction to any one who can open his soul to the reception of things clothed in the grace of the beautiful. And to ensure this as far as possible he should sow good seed—not only good in relation to its growth, but rich in that higher form of goodness likely to largely reward the sower's toils.

It sometimes falls to the lot of the sower to have to complain that the seeds he puts into the ground with so much care do not germinate. It is not unfrequently laid to the charge of Verbena seed that it does not grow; and the accusation is laid at the door of the seedsman that he did not supply good seed, when it does not occur to him who fails with his seed that it might be owing to a want of knowledge or skill on his own part. You can no more coerce seeds, and the laws by which they germinate and grow, than you can sentient animals; perhaps the latter are the most plastic in the hands of him who uses force. There is little difficulty in raising Verbena from seed if only the right method be adopted; and it need scarcely be stated, that he who sows should care only to operate with seeds likely to produce appreciable results in point of quality.

Mr. HENRY ECKFORD, in the days when he was a raiser of new Verbenas, was very fortunate in getting large batches of seedlings. His invariable practice was to sow about the middle of March, or a little later, in convenient sized pots, using a fine sandy loam, and taking care to have the pot well drained. The seed was sown thinly, and then covered to the depth of quarter of an inch or so with fine soil, and the pots placed in a brisk heat of some 65° or 70°, the surface of the soil being kept constantly moist, on no account being allowed to become dry. Good seeds of the Verbena quickly germinate in such a temperature, and in three weeks or a month the plants will be fit to handle, when they require to be pricked off into pans or boxes, two inches apart, and as soon as they get hold of the soil they should be gradually hardened off till placed in a cold frame. The sooner the plants are there the better; heat is not required except to raise plants from seed, and is more hurtful than otherwise to them when growing into size; it induces red-spider, and if affected in this way in a young state it is difficult to rid the plants of it.

Mr. ECKFORD's practice was to plant his

seedling Verbenas out in the open ground on a well-prepared border, generally by the beginning of May. As the seedling plants make a generous growth, the ground in which they are planted needs to be deeply dug and well manured, making a liberal use of decomposed manure. In selecting the site of the flowering bed or border, an open situation should be preferred.—R. D., in *The Gardener's Chronicle*.

[In the north we cannot put Verbenas in the open ground until late in May, or until there is no danger from frosty nights. We grow thousands of Verbenas for seed every year, starting the seed in the house or hot-bed, transplanting as early as the plants can be handled, and transferring them to the open ground about the first of June. These seedlings are strong and make very large plants, and when seed is selected with care, nearly all produce desirable flowers. Cuttings may be made from seedling plants, but this should be done but once.]

THE ORIGIN OF THE FLORISTS' PINK.

As this is the season of the year when the Pink is in perfection, it may be interesting to record the fact, published in an old number of the *Floricultural Cabinet*, that the first Pink worthy of notice was raised in the year 1772, by Mr. JAMES MAJOR, who was then gardener to the Duchess of Lancaster; previous to that there were but four sorts, and those of very little note, being cultivated only as common border flowers. Mr. MAJOR having saved some seed in 1771, he reared several plants, which, blooming the next season, one out of the number proved to be a double flower with laced petals, at which he was agreeably surprised, although he considered it as being only in embryo, and the prelude to still further advance, to be developed at some future period, which is now verified by the rapid strides this beautiful flower made in size and quality during the years which followed. Mr. MAJOR informed the writer of the foregoing remarks that he made his discovery known to a nurseryman or florist, and was offered the sum of ten guineas for the stock of his new Pink; but, acting on the advice of his friends, he declined to sell, and set to work instead and increased the stock with a view of offering it in sale to the public. It was sent out to the public at half a guinea a pair (for it has long been a custom of offering Pinks in pairs, a custom which is continued to this day), under the name of MAJOR'S Duchess of Lancaster, the orders for which amounted to £80. It is recorded that one individual ordered as many as twenty pairs, which was considered in those days an unusually large number. It would be interesting to have a bloom of Duchess

of Lancaster to compare with the fine double varieties of the present day. We appear to have come to something like a pause in the matter of Pink production, as the flowers are now very large and full, and the lacing is as perfect as can well be conceived. But we never can forecast the time of a new departure in nature, and some day there may be produced types largely in advance of our most flattering anticipations.—*Gardeners' Chronicle*.

LETTER FROM AUSTRALIA.

Many thanks for pleasant publications, which are ever interesting. I receive several works on horticulture from England, but none that contain so much pleasant reading matter; in fact, your little brochure eclipses all.

As a youngster I used to receive the story of Cinderella and her Pumpkin coach with a large measure of credulity, but in the face of two I saw the other day at Messrs. WATSON & TAYLOR's, seedsmen, one weighing one hundred and forty and the other ninety-six pounds, I can almost see my way to a belief in the bare possibility of such a thing—at any rate, in a fairy tale. The two were of the Yellow Emperor kind and grown in common soil, without any special attention. A Vegetable Marrow I was shown the other day measured two feet six inches in length, with an average circumference of twenty-eight inches. In fruits we have some "boomahs," or, as our native aborigines say, "big fellow that one." An Apple I saw draw the scale at one pound seven and three-quarter ounces, and a tree of Pears I was assured would average one pound each; one weighed two pounds two ounces. Peaches (Slipstone sort) are common at eight ounces.

I wonder that the growing of the Eucalyptus does not, from its valuable therapeutic properties, attract more attention as to its growth and propagation, as I am firmly persuaded that with ordinary care, in protected situations, the hardier sorts might be grown successfully. Of the value of the oily extract in medicine and surgery, and the sanitary effect of its exhalations while in growth, there can be no doubt. Mr. SANDER, a very successful producer of the extract in a pure and highly rectified form, is at present in America establishing depots and agencies for the sale of this preparation. The Victorian generally swears by it; he rubs it in for gout, rheumatics, sciatica, sprains or contusions, and popular belief accredits it as "the sovereignest remedy for an inward bruise," or any disorganization of the viscera—a sort of heal-all outwardly and cure-all inwardly.

The belief in the sanitary effect produced by the presence of trees, both as regards a grate-

ful shade, a pleasant aspect, and their alleged health-inspiring exhalations, seems to gain ground with us, and the city of Melbourne is busying itself in the direction of tree-planting on a large scale. At Goldfields City there are about sixty miles of double-row planted, and some avenues having been growing for years are fine and strong; these trees are not all indigenous, but are varied with Oak, Elm, Cork-Elm, and Ash. Some of the Oaks, notwithstanding the extreme heat, thrive wonderfully. They are well kept and looked after by a special curator and assistants told off for this duty.—S. W. V., *Sandhurst, Victoria, Australia*.

WALL CREEPERS.

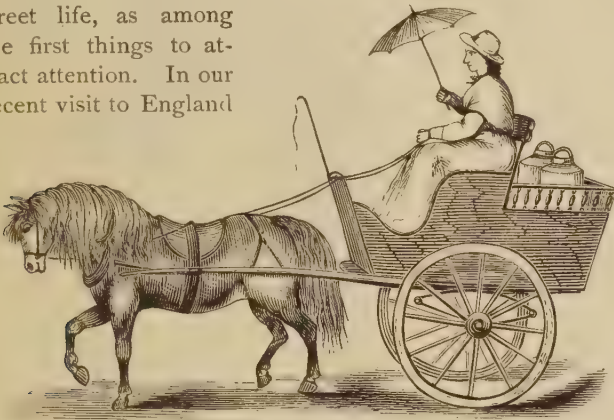
Some of the finest and most showy greenhouse wall creepers are Rose of Castile and Madame Cornelissen Fuchsia, and a well-known *Trachelospermum* (*Rhynchospermum*) *jasmnoides*. Fuchsias are very graceful in habit, and perhaps there are no pillar plants in existence so useful, so easily cultivated, and so showy as Fuchsia if they are chosen of free habit. Once furnish a trellis with flowering wood, keep the plant free from insects, and supply it generously at the root with rich open soil and an abundance of water in the growing season, and there need be no fear of a display of flowers extending over several months. Few persons who have seen the Fuchsias on the roof of one of the greenhouses at Chatsworth will readily forget the display. The *Trachelospermum*, although it does not last so long in flower, is also a lovely wall plant. Its white clusters of flowers, so chaste and charming to look at, and drooping over its rich green leaves, are very effective. It is one of those plants which is spoiled by over-training, and as a balloon specimen it looks, in a way, bald, even under careful training; but given one tie to the young wood on a trellis, and let nature do the rest, and the effect is not easily excelled.—*The Gardener's Chronicle*.

THE ALEXANDER PEACH.—This Peach of American origin is reported to be the first to ripen this season in an unheated orchard-house on the Island of Guernsey. "The other new American, Amsden's June," it is said, is not so forward. "Alexander is one of the best very early Peaches."

TUBEROSES AT THE HAWAIIAN ISLANDS.—D. H. HITCHCOCK, of Hilo, in the Hawaiian Islands, wrote us in January last: "The Tuberoses you sent me are never out of bloom. Some of them have had on eight flower stalks since May, and others are still coming up."

STREET PEDDLERS IN ENGLAND.

Every country has its own institutions and characteristics peculiar to itself, from the highest station in the realm down to the inevitable street arab, that finds his representative in all communities; and any one visiting a foreign country for the first time cannot but observe the different phases of street life, as among the first things to attract attention. In our recent visit to England



MILK CART

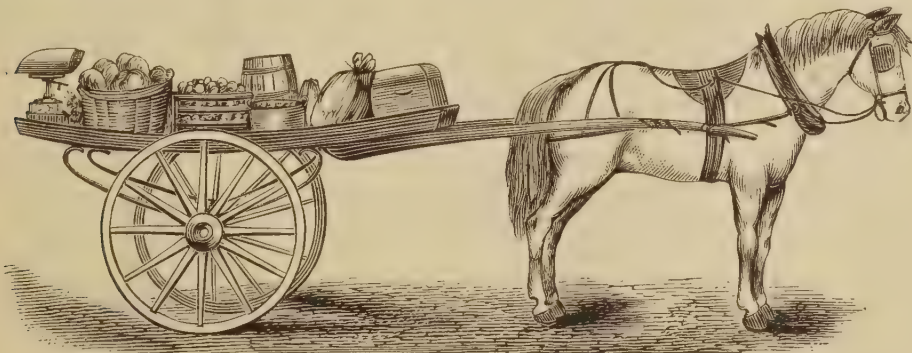
the carts and horses claimed our unqualified admiration and laughter at the same time. The draught horse in ordinary use is a noble specimen of massiveness and power, and the drayman who owns such a beast is justly proud of it. The horses are seldom driven in pairs, as one such can walk off quite easily with any amount the cart can hold, and an American will quickly notice that the driver never—well, hardly ever—rides with his load, but walks with his horse, holding him close by the bit, so that the noble animal soon learns to expect and enjoy the company of its master. Such a habit creates confidence in the horse, and the sensation of a runaway is not half so common there

down hill, that if the diminutive creature was to lose its footing the huge cart, with all its contents, would bury the little animal like an avalanche; but such a scene does not happen, for the streets are exceedingly well kept, and the Shetland is very sure-footed and strong. In Darlington and other towns near coal dis-

tricts these ponies are plentiful; they are used in the mines, and when, from strikes or other causes, the mines are closed, Shetlands are abundant and cheap.

While the draught-horses, large and small, command our respect and admiration, the carts—always carts, hand carts, dray carts, donkey carts, coal carts, milk carts, and so on—the carts, of whatever sort, are sure to provoke our laughter; they are the funniest, clumsiest, most ungainly looking things we ever saw; all of them are made heavy enough to last for generations, apparently, with wheels like our fire engines, only

larger in diameter, and all such vehicles as we have named have but two wheels, with the box resting on very heavy springs. When we take into account the magnificent roads everywhere in England, either in town or country, the absurdity of such conveyances is very amusing. Early in the morning the farmer's wife may be seen coming to town with two or three cans of milk, with which she supplies a few small hucksters, to be sold the same as at our groceries. At such time the green-grocer goes his rounds, peddling Potatoes, Turnips, and such like, which he generally sells by weight, and for which purpose a scoop-scale is attached to the back of the cart.



A GREEN GROCER.

as with us. For light work, such as peddling, the pony is often used, it being much cheaper, and well adapted for that kind of work; and it was very comical to see a small Shetland pony, plump, well-built, and gritty as a mule, trotting along with a clumsy, square-box, two-wheeled cart behind it. It seemed, when going

Among the many bewildering sounds that salute the ear, may be heard the shrill voice of a sturdy-built woman as she cries "Bah boil dwilks! bah boil dwilks!" the plain English of which means, buy boiled whelks, a kind of shell fish quite common on the coasts of England and France. This individual can be

recognized at a distance from her general make-up—a small clothes basket on the head, containing a bushel or two of wheelks; this rests upon a weazel, or pad, the head is invariably covered with a bright cotton handkerchief tied under the chin, the dress skirt is tucked up, a clean, white apron hangs from the waist, and a heavy woolen petticoat and calf-skin shoes complete the picture. We are thus particular, because class distinctions are very marked in the manner of dress. The “merry fishwives” also make their debut after the arrival of the morning train; their dress is peculiar, and consists of a very long jacket, dress, and skirt all of dark, navy-blue flannel; a large cotton, or woolen, ‘kerchief of bright colors is tied across the chest, and a small, black bonnet and white cap completes the outfit, except when an apron is worn, which is usually of checked gingham. The basket is never carried on the head, but a strong wicker creel hangs down the back, suspended by leathern straps from the shoulders. The cry of this class of peddlers varies with the kind of fish they have for sale; as had-docks were in season, we were told, repeatedly, that “’ere’s yer



BOILED WHELKS.

caller ‘addicks, fresh caller ‘addicks.”

In the after part of the day, among the many street-worthies, may be seen the garrulous penny-pieman. This gentleman is often a host in himself, full of jokes and palaver, snatches of songs and, withal, an eye to business. His pies go off “like hot cakes,” as we Yankees would say. His general appearance is that of a good-natured Englishman who has spent some time in the tap-room. He wears a shiny stove-pipe hat, blazing red neckerchief, a white cotton jacket and apron, the apron always tucked up at one side; seedy pants and boots complete the man. His stock in trade is carried in a square tin box, made similar to those used by our peanut peddlers. When traveling, this box is carried on the arm, but when the pieman takes his position, he rests it on a light stand made for the purpose; and now you may hear

him call out, “’Ot mutton pies, pipin’ ’ot! intermingled with many jokes and witticisms, and varied now and then with a verse or two of



ENGLISH FISH WIFE.

some lively, popular ditty. In the south of England this worthy is represented by “the man wot sells ’ot potatoes.”



’OT MUTTON PIES.

Such are a few of the many characters to be seen and heard daily in most of the busy towns and cities of northern England by any one who has eyes to see and ears to hear. —J. W.



WOOD-LOUSE OR SOW-BUG.

MR. VICK:—In your MAGAZINE I have observed, from time to time, various remedies for various insects, but I have seen no notice of one which gives me most trouble of all. Here, it is commonly known as the wood-louse—a little beggar who rolls himself up in a ball when touched. Its special fancy appears to be the more delicate variety of Ferns, the tender fronds of which it eats off as fast as they appear. My Ferns, I should say, are in a small greenhouse, and these little pests appear to breed chiefly in a bed of Moss there. Can a successful war be waged?—W. O., *New Orleans, La.*

The above statements were handed to one of our best entomologists, Mr. ROBERT BUNKER, of this city, who has kindly favored us with the following reply: "The wood-louse of which your Southern correspondent complains, is what is commonly called sow-bug here. It is not an insect, but belongs to the crustaceans. The old naturalists, however, classed them as insects. There are two species, belonging to the genus *Armadillo*, that roll themselves up in a ball when disturbed, and no doubt it is one of them that has kicked up the muss. These pill-millipedes, as they are sometimes called, are mostly confined to the Southern States. I was not aware that they ever did any harm to vegetation.

"Before closing my remarks on this subject, I must relate a laughable incident that occurred twenty years ago. I went down cellar to get a tub and found swarms of sow-bugs inside. They began to scamper in all directions, but I concluded to wait till I got out of doors before I threw them out. To my surprise, when I came out, not one was to be seen, but in place of them a great number of little balls were rolling around in the bottom of the tub. I took in the situation at once, and concluded to watch their movements. When all was quiet, one began to unroll and stick up its head, as if to reconnoiter; then another, and so on, until all were ready for a start, when, by common consent, a general stampede took place."

We should seek to trap the bugs in the bed of Moss; perhaps some meat-bones or a little fat placed in small shallow boxes might tempt them, and thus facilitate their capture.

EVERGREEN LEADER—WATERING PLANTS.

MR. VICK:—When an evergreen of moderate height develops two leading shoots, what would be best to do with it? Ought one of the shoots to be cut off, or would it be better to let it alone?

Can you tell me, also, whether the popular idea, that plants ought not to be watered while the sun is on them, is correct, or is it an old superstition? It seems to me that where you have a dry, sandy soil, and a hot sun, it is more injurious to let tender or young plants wilt in the heat than to water them with the sun full on them. But I am told that I am wrong, and they ought not to have any water till sun-down, unless some pitying clouds give shade earlier. Is this really right? The drought and heat we have lately passed through make me skeptical about this good old rule. My authority tells me that I may water the earth round the plants, but not the plants themselves, as they would be "boiled" in the heat. Is that true?—ENQUIRER, *Morristown, N. J.*

It is better to remove one of the shoots, when an evergreen produces too leaders, for the reason that the tree will develop far more symmetrically with a single stem.

When it happens, as sometimes it will with the best of cultivators, that a lot of newly set plants is lacking water, and the plants are plainly being injured by the want of root moisture, the proper thing to do is to supply it as speedily as possible by watering the soil about the plants, and this can be done without wetting the foliage. After watering, it will be well to place some newly cut grass, or some hay or straw, on the ground beneath the plants to retain the moisture.

PEACH FROM AN ALMOND.

MR. VICK:—By to-day's express I send you a sample of Peaches from a tree which grew from an Almond that I planted a little over three years ago on my lawn. There is no mistake as to the origin of the tree, for I took the pains to have a witness, who saw me plant the Almond in a flower-pot, and subsequently saw me transplant the germ, with the opening shell still adhering, to its present place. I think it quite a singular act of nature to thus transform the nature of a tree, and would like, through your valuable MAGAZINE, to hear your explanation of it, and any other information on the subject which might be of interest to your many subscribers, one of whom I am. I forgot to say this is the first year the tree has borne. It is about twelve feet high. Its greatest circumference is twenty-four feet. The quantity of fruit is about one bushel.—E. P., *Wheeling, W. Va.*

Some of the best botanists think the Peach

and the Almond may be only different forms or varieties of the same species, while others consider it more probable that they are distinct, but very similar species. Which of these suppositions is the true one would make no difference to our acceptance of the statement of our correspondent, in relation to the origin of this particular tree; although, we must say that the change from an Almond, by only one remove, to a Peach of the character of the one we received would be a very remarkable fact. Admitting, then, the possibility of deriving this Peach tree from an Almond, still, if its planting and growth had proceeded under our own eyes, in the manner described, we should doubt that the tree came from the Almond. Unless the soil, in which the Almond was planted, had been sifted, and we knew positively that there was no other seed of the kind in it, we should think it probable that it contained by chance a Peach stone, and that from this the tree sprang.

CINCHONA FORESTS OF SOUTH AMERICA.

From an article with the above title, contributed to a recent number of the *Popular Science Monthly*, a magazine always filled with valuable and interesting matter, we quote a short description of those tropical trees that are the source of the indispensable Peruvian bark and quinine. The forest here described is in Ecuador, some distance above the port of Guayaquil. "Our *cascaillero* soon descried some Cinchonas in the distance by their glistening leaves, which reflected brightly the vertical rays of the sun. This characteristic reflex of the foliage, with the bright, roseate tints of the flowers, and in some species also of the leaves, affords the means of discovering the Cinchonas among the mass of the forest giants. The glossy leaf of the India-rubber tree is easily mistaken for the Cinchona, but skilled *cascailleros* are usually able to distinguish, at a great distance, varieties by the color of the flowers and general appearance of the tree.

"At the bottom of a ravine we followed a small stream, till suddenly our guide shouted, 'Cascarilla!' and we were gladdened by the sight of a number of fair-sized trees of *Cinchona succirubra*.

"The Cinchonas seek the most secluded and inaccessible depths of the forests; they are rarely grouped in large numbers or close together, but are distributed in more or less irregular, scattering patches. The older trees are grand and handsome, forty to eighty feet in height, trunks straight, branches regular, leaves evergreen (six to ten inches long), of a dark-green color, sometimes tinged with crimson, the upper surface of an almost waxy lustre, flowers in terminal pan-

icles of bright rose-tint and of an agreeable fragrance. The bark of the large trees is usually completely covered with Mosses of the most delicate, lace-like texture, interspersed with lustrous, variegated Lichens and diminutive, trailing Ferns, while air-plants and vines in profusion entwine themselves among the branches of the trees, and hang themselves in graceful festoons, forming hammocks, in which clusters an abundance of parasitic growth, particularly of the Orchid family. Vegetable growths develop with wonderful luxuriance beneath the interlacing branches, which permit but little access of sunlight underneath. Everthing is saturated and dripping with moisture; the very air we breathed seemed clammy, aromatic vapor. In these vast forests atmospheric changes are continuous and abrupt; drifting banks of gloomy clouds are followed by glaring sunshine, and then tempestuous showers—all in rapid succession. The temperature is more even, averaging about 65° Fahr., seldom exceeding 80° or falling below 45°, the altitude being about six thousand feet. The season of bark-gathering begins about the 1st of August (in some forests as early as June), and lasts till October or November."

EXPERIENCES AND INQUIRIES.

MR. EDITOR:—I have a few questions to ask, and a few experiences to tell you for the benefit of your patrons. Please say to all who are troubled with the striped bug on Cucumber vines, that dry soot sprinkled on thickly will drive them away. Kerosene and ashes mixed together will drive away the large Squash bug. Sprinkle it on the ground under the vines. I thought I would have to abandon mine to the bugs, when a friend told me to try the remedy I have given, and I have not seen one since.

Two years ago I had a large Oleander that was covered with scale lice. In the spring I thought I would kill or cure. I put carbolic acid in water, so that the odor was quite strong, and washed it with a sponge. I put what water was left on the soil, and I have never had any trouble with scales since, and my Oleander is a beauty.

Will you please tell me the best time to remove the small bulbs from Tuberose? Should it be done in the spring or fall? Does it hurt Asparagus to cut it off before the seed ripens?—MRS. S. W. N., *Lemont, Ill.*

Tuberose, when taken up in the fall, should be dried off and laid away on shelves in a warm place during the winter. When the young bulbs are wanted for planting in spring, they can be removed from the old stocks; there would be no harm in taking off the offsets sooner if there should be occasion for it.

The tops of Asparagus should be allowed to grow during the season, and not be cut until frosts come; it is, however, best to go over the rows and remove the seed-bearing shoots, as the production of seed has a tendency to exhaust the plant.

BUILDING GREENHOUSES.

The constantly increasing attention to horticultural operations by the people of this country is in no way more certainly indicated than by the numerous window conservatories one meets with on every hand. Evidently, however, these fail to satisfy fully many of the more ardent devotees of ornamental gardening. We are constantly receiving enquiries for information in reference to the best method of building cheap greenhouses. Most persons wishing to build, intend the structures for private purposes, while a few are for nurserymen and florists' business. Properly enough, those having little or no experience with plant growing under glass, wish to erect plain, cheap structures, but combining all those features that best adapt

consequently its value, depends upon the perfection of the machine.

Small greenhouses for amateurs will usually be most convenient if built adjoining the dwelling house, but those of larger size, beyond the care of the members of the household, and requiring the special services of a gardener, should stand apart by themselves on a favorable site. A greenhouse built in connection with a dwelling house may be either what is called a lean-to, that is, a building with only one slant to the roof, one of the walls of the dwelling-house forming the back wall of the greenhouse; or it may be a span roof house, with one gable towards the dwelling. The east and south sides of a dwelling-house are the most suitable for a greenhouse. We would not think of building

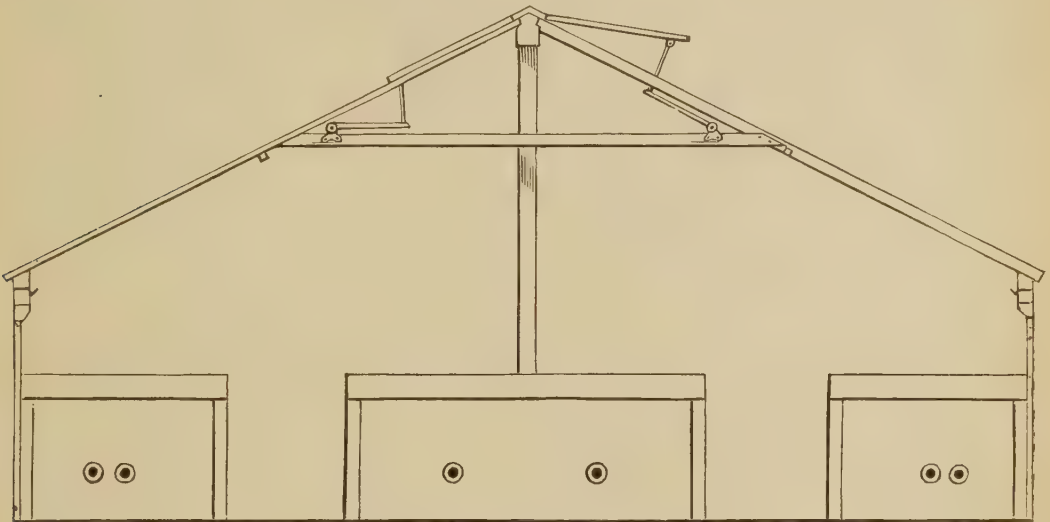


FIG. 1. CROSS SECTION OF GREENHOUSE. SCALE ONE-QUARTER INCH TO THE FOOT.

them to the welfare of plants. Houses of elaborate finish and expensive ornamentation are easily enough built, if one be able and choose to incur the expense; although to make architectural display in a plant-building without impairing its serviceable qualities is more difficult, and, even, requires an amount of skill that few builders will be found equal to. In order to construct any building with economy, it is necessary at the outset to know just what is essential for it to serve the intended purpose; or, in other words, that it should be made according to an intelligently devised plan. But this remark applies, probably, with greater force to the building of a greenhouse than in relation to any other structure; for, if every detail be not well considered at the commencement, the expense of making numerous changes to remedy defects will soon equal the original outlay. Besides, a greenhouse must be considered in one sense a machine that is always at work, and the quality of the work performed, and

a lean-to, except as an attachment to some other building, although, at one-time, it was customary to build up a high brick wall for the rear, and a low one for the front, and place on a slanting roof of glass; these places are still occasionally seen, but a span-roof house is preferable in all respects. Unless circumstances render it impracticable, it is best that a house should stand lengthwise north and south, as it will then receive the sun on every part of it during the day. The size of a greenhouse must be determined by individual tastes or wishes. For ordinary purposes a width of twenty feet is about the most that is desirable in this climate, and the length can be from fifty to sixty feet, which forms a house of good proportion; beyond this length, florists sometimes extend them to seventy-five or a hundred feet. When something more than greenhouse temperature is desirable, it is found best in this section, where we have long-continued cold weather, to make the width of the house less than that already mentioned.

Propagating houses are often only from nine to twelve feet wide. The foundation of a greenhouse for private purposes it is best to construct of stone laid below the frost, and reaching a height just above the surface of the ground. Above this, brick may be used as high as necessary, and, if built hollow, with an air space of two or four inches wide in the interior, it will be the best permanent wall that can be made. In the end, this is the most economical, although more expensive at first. A cheap way, and one quite common now, is to set, deep in the ground, posts of Cedar or other durable wood, and then from the surface of the ground make a double wall of boards nailed to each side of the posts. The upper part of the posts, or that part above the ground, should be sawed to a thickness of four inches in one direction, so that the air space will be four inches wide and the whole wall six inches in thickness. Matched boards of Hemlock may be first nailed horizontally to the posts, and then covered with sheathing paper, such as is now commonly used in house building, and then finished with matched boards of Pine placed perpendicularly. This makes a wall impenetrable by the wind, and the air chamber is an efficient protection from frost.

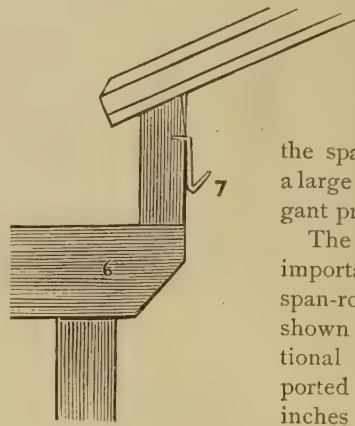
In order to present some of the most important features of a good greenhouse as clearly as possible, we give some sectional illustrations of one of a series of houses, built adjoining each other on our grounds, and used for propagating and raising young plants. Although these houses were built for commercial purposes, they embody principles in their construction that can be applied to greenhouses designed for

sufficient height to admit of the development of those plants intended to occupy it; if Palms and Tree Ferns are to be a part of the stock, sufficient head room must be given to allow them to stand without the appearance of being cramped; but, ordinarily, such houses will not be required, and, when they are, an ample purse

will readily provide the means for the proper heating of

the space included in a large building of elegant proportions.

The ridge-pole is an important piece in a span-roof building; as shown in the cross sectional view, it is supported by posts four inches square. It is made of stuff six inches



wide and three inches thick, with a shoulder cut along the whole length of each side of it, one inch and seven-eighths from the upper edge, which is exactly the thickness of a sash-bar. The upper ends of the sash-bars rest on this shoulder, which is three-fourths of an inch wide, and butt up against the upper or key-shaped part of the ridge-pole, as shown in figure 2. The different parts seen in figure 2 will be easily recognized: 1 is a section of a sash-bar; 2, the ridge-pole; 3, a rafter; 4, the cap; 5, section of perpendicular sash-bar for the end of the house, rabbeted on each side to admit of glazing inside and outside, or what is called double glazing.

The sash-bars and rafters are made of inch and a quarter stuff, being an inch and an eighth in thickness when dressed. The rafters are three inches and three-eighths in width when finished, and on their upper side or edge are exactly the same form as the sash-bars. A piece an inch and three-eighths thick is cut out from the lower side of the upper end of the rafter, making a shoulder that rests on the shoulder of the ridge-pole; thus the upper side of the rafter forms a sash-bar. On the rafters and sash-bars, besides the rabbets for the glass, there are grooves, one each side, as shown at 1 and 3 in figure 2, to take the drip from the glass and conduct it to the eaves, where it is received in a little trough of zinc, as shown at 7 in figure 3. The situation of the sash-bar and the rafter on the ridge-pole are correctly shown in figure 2; they are both fastened to the ridge-pole by nailing through them into the shoulder. At their lower ends they rest on a plank an inch

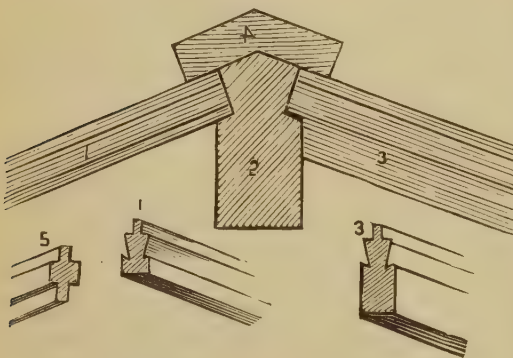


FIG. 2. RIDGE-POLE, RAFTER, SASH-BAR, CAP, &C.

any other use. The pitch of the roof, it will be noticed, is low; it is about 25° . As a rule, it is best to give the roof only enough pitch to carry the water off quickly; more than this will incur a loss in heating, without any compensation, excepting appearance. Of course, a house designed principally for show, must have suf-

and a half in thickness that runs along the whole length of the wall and forms one side of the trough that receives the water from the roof; the same piece on the adjoining house forms the other side of the trough that serves in common for both houses. The bottom of the trough rests on the cross pieces that serve also as ties to the wall, the end of one of which is shown at 6, figure 3. In building a single house, a two-inch plank nailed level on the top of the wall will form a plate; that plate should be beveled on the inner side sufficiently to allow the water that it will receive as drip to run off; along the outer edge it should support, the whole length of the house, an eave-board about ten or twelve inches wide, against the inner edge of which the sash-bar should butt. The angular space between the eave-board and the plate can be filled with a piece of stuff to fit, and that shall extend inwards an inch or more from the edge of the eave-board. Upon the edge of this three-cornered piece the ends of the sash-bars and rafters can rest.

The beauty of a roof made as here described, is, that it is as light as it possibly can be consistent with strength. The material used is Pine. The whole roof is supported by posts set under the ridge-pole, and standing about sixteen feet apart; thus, a house thirty-two feet long, would require but one post, placed at the center. The glass used is eight by ten inches,

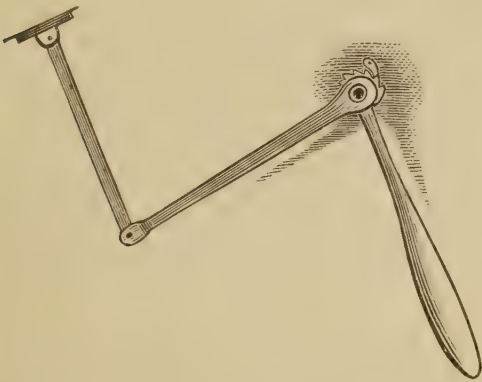


FIG. 4. LEVER AND RACHET.

and the sash-bars and rafters are so placed as to easily admit the panes. A pair of rafters is placed at each end of the house; commencing at one end, after the rafters are in position the sash-bars are fastened one after another until four have been placed, and then a rafter is put up, serving as both rafter and sash-bar; thus every fifth piece is a rafter. Each pair of rafters is tied together by a strip of wood an inch thick and three inches wide. It is most convenient to give the bars and rafters two coats of paint before putting them up; it can be done in a very short time, and will be found quite a saving of labor.

The glazing is done by bedding in putty, but without any putty on the outside of the glass; the rabbet on each side of a sash-bar is filled with putty, and then, commencing at the eaves, one pane of glass after another is placed in position, and pressed snugly down into the putty, the panes overlapping each other about a quarter of an inch; the less the panes lap the better, as dust collects in the laps and, if these are broad, they materially obstruct the light, after a time. As each pane of glass is put in place, it is secured by a number of little three-cornered tacks or pieces of tin, such as glaziers use; and one tack is driven in at the lower corner, on each side of the pane, and then bent down over the lower edge of the glass, to prevent it slipping down. This completes the setting of the glass, except, that when the glass is all in, the edges next the sash-bars are painted with a coat of thin paint, to fill completely the joint and make it water-tight. Two coats of paint in this way will be enough; afterwards a new coat should be given every year, along each side of the sash-bars, to keep the roof in good repair.

The arrangement of the plant tables and pipes for heating is shown in figure one. The boiler is placed in a pit or cellar at the north end of the house, over which is a work-room. The details of heating and heating apparatus we can only allude to. The cheapest and best method of heating a greenhouse is by a boiler and pipes containing hot water. There are a number of good boilers now manufactured for this purpose; one of the best in all respects is one invented and now manufactured by a practical machinist of this city; it is called *Vick's Cylinder Sectional Boiler*. The same party has made an apparatus for lifting the ventilators on greenhouses, by which all the ventilators on one side of the house can be raised or lowered together by one movement; this is done by a lever and ratchet wheel attached to the end of an iron rod connected with all the ventilators, as shown at figure 4. The work of opening and closing ventilators requires but a minute of time, which is a great saving over all other methods, and sometimes, in sudden storms, is a matter of much consequence.

In the above descriptions and illustrations we have endeavored to convey the most essential ideas to be regarded by a builder, and believe they are sufficiently explicit to work from, and will thus enable any one to put them in practice in any part of the country without calling in the services of an architect—not that we would willingly reject such assistance—but we are aware that ordinarily, in rural districts, it is not to be obtained except with difficulty.

THE TUBEROSE.

MR. JAMES VICK:—I regret to say that the Tuberoses grown from the bulbs of last spring seem to be turning out like those planted at that time, bushing out like Wheat, without any appearance of a main stem being formed, on which the beautiful and fragrant blossoms appear. Two years ago we had them most beautifully developed. Last year we had a most complete failure, the formations being as above stated; and those planted this season, though specially cared for, look as if they would also prove a failure. Can you throw any light on the matter? Can it be that we have a spurious stock? Or what can we do in order to have this most beautiful and fragrant flower?—F. P. R., *Tilton, Ky.*

The Tuberoses planted by our correspondent more than a year since must have lost their flowering stems from some cause, and, therefore, instead of bearing flowers, produced leaves and a large number of small bulbs. If the old tubers were planted this spring, with the small ones attached, the result would be as described, a mass of leaves and no flowers, for the young tubers would be too small to bloom, and the old never produce a flower stem the second time. After the Tuberose has flowered, the small tubers should be removed and planted in drills an inch or two apart. If of good size, under favorable circumstances, they will make flowering bulbs after one year's growth.

The nature of the Tuberose and its culture seems to be not well understood. Nothing is simpler than the culture necessary to success, and nothing easier or more sure than failure under improper treatment.

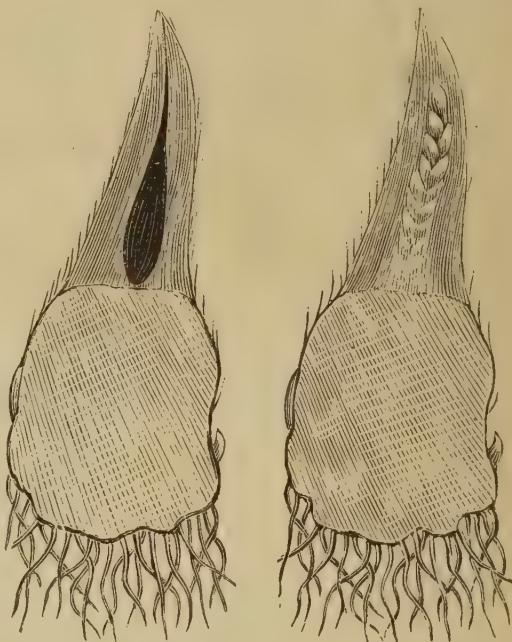
In most of the bulbous, and many of the tuberous plants, not only is the nutriment designed to sustain the flower the next season gathered and safely stored in the bulb, but the flower-stem and the miniature flowers are formed, ready for growth at the first opportunity.



SECTION OF HYACINTH.

We give an engraving of a Hyacinth which we divided and placed in the hands of our artist for the purpose of illustrating this point. We selected the Hyacinth because the embryo flow-

ers are usually more fully developed in this than in most any other bulb. The Hyacinth is quite hardy, and the germ is not easily injured



UN SOUND TUBEROSE.

SOUND TUBEROSE.

or destroyed. If it should become broken after starting, or injured in any way, the bulb grows from the center, and will at once commence preparing for flowering the next summer.

The Tuberose is entirely different. It flowers only once, but forms small bulbs on its sides, and these in time become flowering bulbs. The Tuberose is a native of warm countries, and delights in great heat. It will not endure cold and moisture, either in the ground or stored away for future planting. The little flower-stem is formed in the bulb, as we have shown in the engraving of a healthy Tuberose, though not always so plainly, as we had to cut several before we found one sufficiently distinct for our purpose. A tuber like this will flower; but if it should be kept in a cool room for a few weeks and especially if the room should be also damp, the flower-stem would become discolored and finally decay, and, on cutting, it would present the appearance shown in the engraving of an unsound Tuberose. This unsound Tuberose would grow, give plenty of leaves and young bulbs, but no flowers.

LARGE PELARGONIUM.—I see a great many letters in your MAGAZINE telling of large plants. I saw one the other day I wish to tell you about. It is a scarlet Geranium. It was a slip last September, and is now forty inches in height. I counted ten leaves on it that measure twenty-four inches in circumference.—P. P. N., *Cassopolis, Michigan.*



SANVITALIA PROCUMBENS.

ANOTHER STRAY FLOWER.

I noticed in the *MAGAZINE* for July, under the heading of "A Stray Flower," a description of a *Silene*. I wish to call the attention of your readers to another stray flower, which I have had in my garden every year since 1868. It is the double *Sanvitalia procumbens*. It is a very pretty, low plant, in habit like the *Verbena*, though it does not lie so closely to the ground. The flowers are double, yellow. There is one difficulty with it. Not more than one-quarter of the flowers are perfectly double, the larger number being single or semi-double, and in both cases have a black, unpleasant center. This is the reason, I suppose, that it has not been more generally cultivated; for when I obtained it, the seed was recommended as a promising novelty. When the flowers are perfect, it is certainly a very pretty plant, and particularly valuable for baskets and vases. I save a little of the seed every year, but I do not know of any being cultivated, except my own, and those to whom I give the seed.—HAMPTON.

The *Sanvitalia procumbens flore pleno* described by our correspondent was introduced in 1866, and but for the serious fault above-mentioned, doubtless would have become popular. The imperfect flowers were so numerous and unsightly, that its culture was generally abandoned.

HYDRANGEA AND TEA PLANTS.

MR. VICK:—Please tell me, through the *MAGAZINE*, what is the matter with my *Hydrangeas*. I think they are both *H. Japonica*, but am not certain. I put them in the cellar in winter, and in the spring they looked nice and green, with long, tender shoots. They have bloomed three years, but never have been perfect, only a few blooms around the edge of the bunch of buds will open. I set them in the ground last year, and when they did not bloom well I thought they were too much smothered up with the Ferns, for I put them on the north side of the house. So this spring I put them at the corner of the house, one at the west and the other at the east. They are full of bloom, which seem to be blasted. Last fall I took them up and put them in Tobacco buckets. They receive a soaking every day or so. Can the earth be too rich for them, or what can the matter be? I had thought I would cut them back to the ground this fall, and if they do no better I will not waste my time with them.

I have two China Tea plants, four or five inches high. Will it be safe to leave them out this winter? I will be much obliged for any information about either.—SUBSCRIBER, *London, Ohio*.

Can you settle the question of the identity of your *Hydrangeas*? Perhaps they are not *H. Japonica*. As they have been so unsatisfactory, we should not expend much more care upon them, but would turn them into the border, and in the fall protect them with some leaves, and try to winter them in that way.

The Tea plants cannot be preserved through the winter in the open ground. The last of this month we should lift them and pot them carefully, keeping them rather close for a time, until assured they are established in their new quarters. They need greenhouse treatment in Ohio, like the *Camellia*.

RAISING AN ABUTILON.

MR. JAMES VICK:—Some fifteen months ago I purchased an *Abutilon Darwinii tessellatum*. It is not doing well, and I can find no instructions in regard to its culture in your *MAGAZINE*, and, so, concluded to ask you to inform your patrons, through that source, how it should be treated. Mine is set in a tin can about the size of a gallon bucket, has a good, rich soil, and I give it just water enough to keep it very nicely moist. It has been blooming about two months, but it does not send out any new branches, and drops its leaves. Every one admires its beautiful foliage. It is the only plant or shrub of the kind in this valley, but if its culture was better understood, it would, I think, become quite a favorite.—MRS. G. W. W., *Crescent Mills, Cal.*

If this plant should be turned out into the open ground, we have no doubt it would begin to recover. It is probably lacking drainage as it now is. If put out like a Cabbage plant, it would have a chance to take care of itself, which we are confident it is able to do, if the odds against it, in the shape of codling, are not too great.

LOCATION OF A SUMMER HOUSE.

MR. VICK:—Would you please mention in your MAGAZINE the nicest situation for a summer house. We have a nice large lawn, and the house faces the east, with no road coming to it only for our own use.—MISS MAGGIE, *Wisconsin*.

The place for a summer house is controlled largely by the purpose for which it is designed.

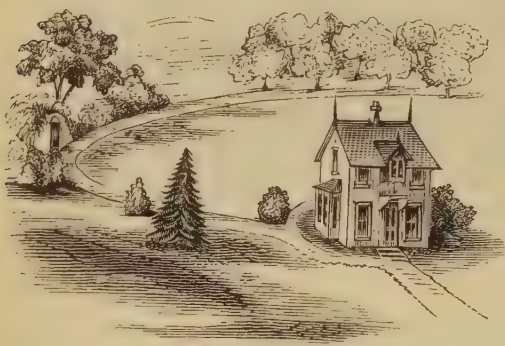


FIG. 1.

If, for instance, it is intended as an adornment, then a place is chosen where it may be easily seen from the main avenue, and something elaborate in style, both as regards the wood-work and painting, is most frequently adopted. If, on the other hand, quiet retirement is the object, a plain structure built among shrubbery, or near some trees, at one side and a little back from the dwelling house, would be desirable, as in figure 1, giving perfect seclusion, and, at the same time, a good view of the house and surroundings.

It sometimes happens, however, that a summer house is desirable as a point of prospect or look-out, and especially so if there be rising ground on the premises, with the proximity of large, open valleys, a lake, or river. In such a

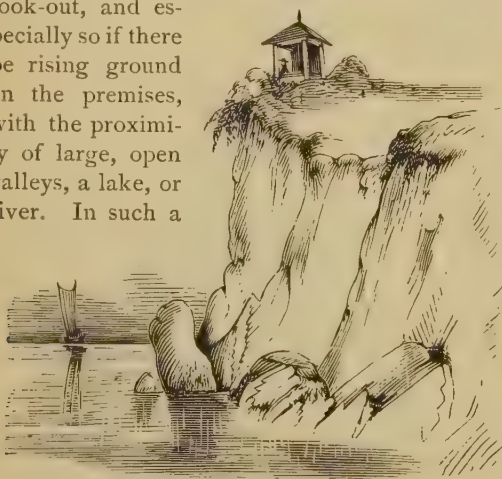


FIG. 2.

case, that place is selected for it that will give the most charming prospect, without being at too great a distance from the residence (figure 2), and this pleasant retreat will be plain or fanciful, according as it is conspicuous from

the public thoroughfare, or hidden away in some cozy nook. For our correspondent, we would suggest that the summer house should be placed off from the entrance road, and in a place somewhat retired, and that it be reached by an easy, graceful walk, winding among trees and shrubs.

CLIMBING ROSES—HONEYSUCKLES.

MR. VICK:—I am only a new subscriber to your MAGAZINE, yet I am very much interested in it, especially that portion devoted to questions and answers. May I ask you a few questions concerning my Climbing Roses? I have two, a Baltimore Belle and a Queen of the Prairies, which have been the admiration of the neighborhood, but latterly they have not been a success. When the young shoots have attained a height of two or three feet, a small, green, three-cornered grasshopper comes and eats off the end of the shoot, thereby spoiling the growth. I have tried hellebore and Paris green, but all to no purpose. What is the best way to protect them during the winter? I have generally wound them with straw, but last fall I laid them down and covered them with earth. This spring, when uncovered, I found a family of mice had taken up their abode among them and girdled every stem. I am rather discouraged with trying to grow Roses.

I have a lovely Honeysuckle, but do not know how to propagate it. Shall I slip it, or divide the root, and when shall I do it?—MAI, *Ernesttown, Ont.*

The insect here described as injuring the Rose shoots is, doubtless, what bears the popular names of Tree-hopper and Leap-ing Harvest Fly. There are quite a number of species of them, and we cannot be positive which one this is.



There is one kind that sometimes makes the Virginia Creeper its home; this one is *Membracis Ampelopsides*. These insects puncture the bark of the trees they infest, and draw from them the sap upon which they live; the females also penetrate the wood with a piercer they are furnished with, and lay their eggs in the young twigs and shoots. Locust trees are much subject to one species of Tree-hopper, and of these HARRIS says: "Tree-hoppers will remain at rest for hours together, but as soon as anything disturbs them they jump a distance of five or six feet."

We do not know of anything that can be used for their positive destruction; but frequently syringing the plants, even with water only, would drive them off for the time, and probably lessen the amount of mischief they perform. If troubled with them we should be apt to try a mixture of kerosene and water—a tablespoonful of oil to a gallon of water—throwing it on with a syringe.

Climbing Roses, Grape vines, and other vines and plants, when laid down for the winter, are

always liable to injury from mice, and the best way to protect the plants is to provide poison for the mice. A good way is to mix some arsenic with some Corn-meal and place it in a drain-tile laid on the ground near the plants; the mice can run into the tile from either end, eat and run out, while the meal is perfectly secure from the rain. If more convenient, a little piece of square boxing, without any ends, can be made by taking four pieces of inch board about a foot or fifteen inches long, two of the pieces five inches and two of them three inches wide, and nailing them together to form a square tube three inches each way inside. The meal and the medicine should be replenished as frequently as necessary.

Honeysuckles can be propagated by layering.

A WINDOW CONSERVATORY.

MR. EDITOR:—I have been a subscriber to and an admirer of your MAGAZINE since its first appearance, and have found many valuable hints and suggestions in floriculture in its pages. I have the back numbers nicely bound in Russia, and consider them among my choicest books.

My husband has just completed a bay window, or small conservatory, for me, a description of which I think might be of interest to your readers. It is built in the form of an enclosed porch, with double window to the south, and a single one to the east, the main building north and west. This is made of matched flooring, and lined with zinc. In size it is two feet deep and the length and width of the conservatory, four feet by eight feet, and is roofed over with matched flooring. From this reservoir a small pipe, fitted with faucet and stop-cock for regulating the flow of water passes down through the conservatory at one side, and, running along under the floor, comes up again into a small aquarium placed upon an octagonal pillar in the center of the room. Thus is formed a beautiful fountain that preserves a moist atmosphere. A waste-pipe leading from the aquarium carries off the surplus water to a barrel sunk in the ground on the outside. I have also a rubber tube, about one yard in length, fitted with a fine rose, with which, by simply attaching it to the fountain, I am enabled to throw a fine spray to any portion of the room. As this room is separate from the sitting-room, being connected only by a door four feet wide over which I hang a curtain, I can use water as freely as I choose without danger of injuring carpets or furniture.

My plants are doing very nicely since removed to their new quarters, and by their efforts at blooming seem to appreciate the change.

Our sitting-room is heated by a base-burning

stove, which we hope will be sufficient for the cold months; if not, a small oil-stove will not be expensive. Can any of your correspondents inform me what kind of stove will be the most suitable for the purpose, and how to arrange it to the best advantage?—MRS. J. J., *Geneva, Nebraska.*

THE ROSE.

Who can describe the beauties of the Rose? The more you study and understand it, the more you admire and wonder at its excellences, and are surprised that it is not more generally understood and cultivated. Our humble dwelling is surrounded with them in full bloom. They fill the eye with their untold beauties and the air with their delicious fragrance. They help greatly to restore Paradise to earth.

Of the five hundred or more varieties, select what you like best. In the Hybrid Perpetual class there are many choice kinds—the Auguste Mie, General Washington, Paul Neyron, and Victor Verdier, are especially charming. Don't neglect the Climbing—just what you need around your door-ways—and in the ever-blooming family you will find a rich variety.

You will be surprised at the enjoyment afforded in their cultivation. From June until late in autumn they will regale your senses. Their lessons are many for the proper performance of life's duties and work. While you should not neglect other flowers, most of which are worthy of care and cultivation, be sure not to neglect the Rose, sometimes called the Queen of Flowers.—A. W. R.

CARBOLIC ACID FOR INSECTS.

I made a soap suds and put some of the crude carbolic acid in it till it smelled pretty strong, only a few drops being required for a small pan of water, probably holding two quarts, and thoroughly washed my fine Gooseberry bush and two Currant bushes. One application did the work for the worms, and I feared it had for the bushes, too, as the leaves turned a little yellow, but they soon got over it, and they look nice and green yet, while the other bushes are stripped of their leaves. I had too many bushes to dose them all. I use it on Rose bushes for slugs and aphids, too. When weakened, carbolic acid is an excellent throat gargle—a very little swallowed will not hurt any one. I could not keep house without it; people have not found out the half that it is good for. I use it for worms in pots of earth or in Wardian cases, lice on hogs or children's heads. I am sure it will kill all insects it gets on. Of course, it must be diluted according to what it is used for.—V. P.

A MAIZE INSECT.

I have become convinced that the price of garden produce is eternal vigilance, for nothing seems exempt from some form of insect attack. My early Minnesota Corn, though now (June 24th) two and a half to three feet high, is almost an entire failure, the leaves turning brown and the stalks showing decay in the center. Upon pulling up, I sometimes find a small worm, in shape and color like an angle-worm, but on a much smaller scale. On others, is a small, thin, whitish worm that we call wire-worm, and still others have no indication of animal life other than a hollow just above the crown, whence decay extends up the stalks. Still another form of insect attacks the early Eight-rowed Sugar and Stowell's Evergreen, and I have been fortunate enough to capture a few of these pests, which make their entrance several inches above the ground, leaving traces to guide the observing eye to the lair of the destroyer. The insect is a small worm, about an inch in length, with dark brown stripes running lengthwise of the body, the alternate ones narrower and of a whitish color. It is provided with several pairs of feet, a pair of mandibles at the head, the extremities being similar in appearance, and of a light or snuff-brown color. The insect is extremely aggressive upon being captured, and very destructive to the tender stalks of Corn. Can you tell me from the description what it is, and whether there is any remedy that will avail in the future to prevent the attacks of the three forms I have described? An answer in your MAGAZINE is desired.

The Triumph Potatoes are looking splendidly at the present writing, being strong growers, with fine tops. If the development of tubers in any degree corresponds with the growth above ground, I shall have no reason to complain.—T., *Mantua Station, O.*

THE IMPORTED CABBAGE WORM.

I would like to make observations on the Cabbage worm this year, and wish to get all the light I can that will help me in my study. I grow from 3,000 to 5,000 early Cabbage, and from 17,000 to 25,000 late Cabbage, each year. During 1878 I had one plot of two acres of fine Cabbage on a Clover and Timothy sod. Most of it was manured with stable manure one year, the next year with a coat of (heavy) ashes, and the following winter a heavy coat of tankage from the slaughter and packing house (heads, feet, etc., steamed.) In the spring the sod was plowed and planted to Cabbage.

The result was an immense crop. The butterflies were very numerous the whole season, and fears were expressed that I should have no

Cabbages, on account of the worms. The crop, however, received very slight damage from the worms, except on the outside of the patch to the sixth or tenth row in. When selling in the fall, a customer called attention to the chrysalis on the Cabbage, which, upon being opened, showed something that looked like maggots, so that I think there is a parasite at work.

We have observed that large patches receive much less injury than small ones. It is very rarely that Cabbage is raised with any success in small patches.

I stated at the Indiana State Horticultural Meeting, that if we manure heavily, cultivate thoroughly, and grow in large patches, we can raise Cabbage.

Governor FURNAS remarked that we ought to keep them off the outsides of the patches also. This is the point on which I am anxious to be informed; hence, would like to aid you and the other noble investigators to find out how it is to be done.

From what I can learn, the hot-water process (lime, pepper, coal-oil) has proven a failure, at least, partially so; and to catch the worms or butterfly is a big job.

In our city an Irishman raised a splendid crop of Cabbage by sprinkling the plants with a decoction of May-apple-root. If this last remedy is successful, it is one that can be easily obtained, at least in the West.—H. C. MARSH, *Muncie, Ind., in American Entomologist.*

DOUBLE THALICTRUM.

Those of our readers who were interested in the double-flowered *Hepatica triloba*, noticed a few months since, will be pleased to learn of similar characteristics in the neighboring genus, *Thalictrum*. THOMAS MEEHAN, in a note to the *Botanical Gazette*, says of *Thalictrum anemoides*: "Double *Thalictrums* are occasionally found, as many instances are on record in the literature of the past one hundred years. Those which I have seen have been white, and, at the florists' would say, rather semi-double than double. I have one now in flower sent me last year by Mr. DORY, of Springfield, Ohio, that is as double as it is possible to be, and of a pretty, rosy tint of white. The petals are as regularly arranged as in a first-class double *Camellia*. The object of this note is to encourage observers still to look for double ones; as although double ones are now not novelties, there may be novel shades of color.

DELPHINIUMS.—The prettiest flowers in my garden to-day (June 25) are the Perennial Larkspurs. Such a show of various tints of intense blue I never before beheld.—S. J.



BOTANY FOR LITTLE FOLKS.

Our readers have already been apprised of the distinction in plants that is, usually, most clearly marked in a variety of ways, but in none better than by some well-defined features of their leaves. We refer to those great classes of flowering plants known as outside-growers and

inside-growers, or exogens and endogens, names referring to the manner in which the cells are arranged, and their growth continued. The same distinction is recognized, also, by the term, monocotyledon, applied to a plant like the Corn or Maize, the plumule of which presents but one seed-leaf, and the term dicotyledon applied to a plant like the Cabbage, that germinates with two seed-leaves. The difference in the internal structure of the plants of these two classes is almost invariably indicated by the foliage; the leaves of the outside-growers, having their veinlets running into and uniting with each other so as to form a net-work skeleton, while the veins of the endogens, or inside-growers, run parallel with each other the length of the leaf, and any intersecting veinlets connect them at right angles. Thus, by the appearance of

its foliage, we are able to refer, at sight, almost any plant to its proper natural relationship, in regard to these two great classes. Heretofore those plants we have particularly considered have been exogens, or those having net-veined leaves; now we propose to notice a few endogenous plants, and observe some of their more prominent features.

Who does not know the Wake-Robin? the children's flower, almost as much so as the Dandelion and the Buttercup. Of the several species of this spring wild-flower, we select the large, white one, *Trillium grandiflorum*, for illustration. It will be noticed that the plant has three leaves arranged in a whorl; the



Fig. 1. *Trillium grandiflorum*.

flower has three petals and three sepals, and, by reference to figure 2, where a front view of the same flower is given, we perceive there are twice three, that is, six stamens and three sessile stigmas crowning the ovary, and this, as shown by the diagram, is three-celled and six-sided. Thus, all the parts of the plant are arranged in threes or sixes, multiples of threes. Surely, this plant has been properly named *Trillium*! The arrangement of the parts of the flower in threes, as in this case, is the common mode among the monocotyledons. We have previously learned how very generally the



arrangement of the parts of flowers in fives prevails among the dicotyledonous plants, how in a few cases the organs are in twos or fours; we understand that the flower represents the terminal part of a stem or branch, and that the

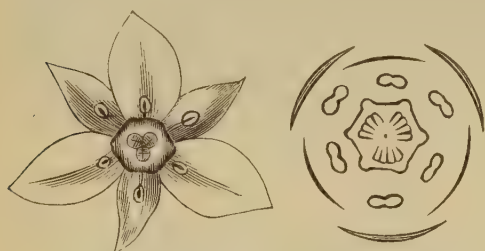


Fig. 2. Trillium Flower and Diagram.

floral organs are, in a certain sense, transformed leaves, and that their numbers and position are governed by the positions of the leaves on the stems. With these facts in mind, we can but admire the beauty of the present illustration by the Trillium of these fundamental statements. The transition from leaves to the next whorl above them is so slight that the green petals appear as only diminished leaves, while the petals, besides being smaller than the leaves, lack the green coloring matter and have a finer texture, but still present the general leaf-form, and even the peculiar veining of the leaves.

The Trillium may be considered as an example or type of the almost uniform method among monocotyledons of the arrangement of the floral organs in threes or multiples of threes. And,



Fig. 3. Tulip.

this is consistent, as we shall see, with a great variety of forms of flowers, produced in the usual way by changes in the shape, number and color of the different parts. Before leaving the Trillium, we must take notice more particularly

of its leaves; these we should expect to find parallel-veined, but in fact it is net-veined, thus being a notable exception to the class to which it belongs, even as the Pink is an exception among net-veined plants. A few plants in each class are exceptions to the rest in their venation, but they are so few that they can almost be counted on the finger ends; as a rule, the net-veined leaves represent those plants that are exogens, and the parallel-veined leaves the endogens. The latter class contains a much smaller number of families and genera than the former, but its representatives are everywhere, and make up in numbers for what is lacking in variety. When we consider that all the Grasses, including the valuable cultivated grains, the



Fig. 4. Yucca filamentosa.

reeds and rushes, and a great variety of water-plants, all the liliaceous plants, consisting of many genera, the Palms of warm and tropical regions, the Orchids, Arums and Amaryllids, and numerous other plants, are inside-growers, we can form some slight conception of their universal distribution. If we should be deprived of them, we should lose some of the most important plants that supply the world with food; we should lose others that serve various economic purposes, and our gardens would be shorn of a large share of their highest beauty.

Of all the families among the endogens, the one furnishing us the greatest number of hardy cultivated plants is the Lily family, or Liliaceæ. A glance at the Lily will show us that its beautiful flower is composed of two whorls of three parts in each. These parts are so alike, that the terms calyx and corolla are seldom applied to them; but, instead, they are spoken of, as a whole, under the name of perianth, meaning around the flower, the word being derived from *peri*, around, and *anthos*, a flower. Six stamens are present, and a style with three stigmas, and a three-celled ovary. Having clearly fixed in mind this style of flower, one will be at no loss

to refer to its family any Liliaceous flower that may be met with, especially when it is known what changes it may assume, consistent with its



Fig. 5. Crown Imperial.

real character. Some of these changes in form will be noticed in this connection, as seen in familiar garden plants.

A very conspicuous member of the Lily family is the Tulip, one of the most showy flowers that makes gay the garden in spring. A number of species of Tulips grow wild in different



Fig. 6 Tritoma.

parts of Europe and Asia, but none have been found in this country. The cultivated garden Tulip is *Tulipa Gesneriana*, and is a native of

Syria and Persia, and has long been in cultivation. The Dutch have carried the cultivation of this plant to a high state of perfection, and every year bring out some new varieties of it. Two hundred and fifty years ago there was the greatest excitement in Holland about the Tulip, and bulbs of fancy kinds brought fabulous prices. Great speculations were carried on in the purchase and sale of the bulbs, and immense sums of money made and lost. The bulbs of the higher prized sorts were sold by weight in grains, and brought prices that would have purchased small farms. One variety, called *Semper Augustus*, frequently brought two thousand florins, or about a thousand dollars. At one time, four thousand six hundred florins, and a new carriage, two gray horses and harness complete were given for one bulb. Another bulb of the same variety was exchanged for twelve acres of land. The excitement of speculation in these bulbs at length became so great as to include all members of society, from the highest to the lowest. The operations were conducted much as oil and grain speculations have been carried on with us, without the parties ever seeing the articles they were buying and selling. After this excitement had run a course of three or four years, the bubble burst, leaving the most of those who engaged in it to any extent in the condition that lottery speculators are usually left in; a few had acquired the wealth that the masses had lost. Speculative manias will arise from time to time; they are, doubtless, consistent with humanity and a necessity of it, but it is to be hoped that one instance of a flower craze of this kind will be sufficient.



Fig. 7. Scilla.

A very distinct member of the Lily family is the Yucca, of which there are many varieties. One that may be cultivated in any part of the country is *Y. filamentosa*, a plant that throws up from its center a tall stem bearing a large spike of numerous white pendent flowers.

The Crown Imperial and the checkered Fritillary, both of the same genus, *Fritillaria*, are greatly admired early-flowering plants.

The little *Erythronium*, or Adder's Tongue, of our woods and copses belongs to this family, and so do the *Calochortus* and *Triteleia* and *Brodiaea*, those beauties of the canyons and hill-sides of Colorado and California. In the same connection may be mentioned the favor-

ite Tuberose, and the Agapanthus, and the Day-Lily, or Hemerocallis. The Red-hot Poker, or



Fig. 8. SINGLE HYACINTH

Tritoma, that makes such a blaze of color in our gardens in autumn, some may not have thought to associate with Lilies and Tulips, but it is a very good relative, and can hold up its head with any of them. The exquisite little Scilla, throwing up its flowers early in spring before it shows a leaf, is another highly-prized garden flower in this list. Although our engravings do not show it, as they are on too small a scale, the flowers of both the Tritoma and the Scilla differ from that of the Lily by having a tubular perianth, that is, the parts of the perianth are united near the base, but six-parted above. This feature is more clearly shown in the Hyacinth, which has quite a long tube compared with the reflexed blades. In respect to form of perianth, therefore, Liliaceus plants present quite a variety, as we have already noticed, in the Trillium a green calyx; in the Lily, the sepals and petals colored alike; and, lastly, in other flowers, a tubular perianth with six divisions, the tube sometimes being very short, sometimes scarcely enough united to form a tube, and sometimes of considerable length; always are present the six stamens and a three



Fig. 9. ROMAN HYACINTH.

parted stigma. The best Hyacinths now produce tall, compact spikes of flowers, but the plant in its natural condition gave blooms nearly like that of the Roman Hyacinth. The effect of cultivation and selection has been to lengthen the spike, increase the number of flowers, and, lastly, to produce double flowers.

A large proportion of the plants of this natural family are either bulbous or tuberous rooted. We must remind our readers that the Onion is a member of the Lily family, and that in the form of its flower, its seed and its bulbous base, it is fashioned closely like the Hyacinth. Without mentioning other plants, we will only add that a remarkable interest attaches to the Liliaceæ, and its members are so numerous, an opportunity will seldom be wanting for its study.

PANSIES.

The Pansies look so bright, mother,
In their small shaded bed;
They look at me and smile, mother,
And nod each little head.

They're cunning little things, mother,
They watch me while I play;
I don't feel lonely now, mother,
But merry all the day.

The flowers are all sweet, mother;
They're bright and fresh and gay;
But Pansies are my friends, mother,
They smile at me all day.

They make me think of you, mother,
So gentle and so kind;
Their perfume pleasant is, mother,
None quite so sweet I find.

And should I pass away, mother,
To that bright home above,
Plant Pansies round my grave, mother;
They'll whisper words of love.

Each little face upturned, mother,
Will look up to the light,
And say, "Your child is there, mother,
Where all is pure and bright."

And then you will not grieve, mother,
But soon will join me there,
Where flowers never fade, mother,
In paradise so fair.

—SIDNEY EMMETT.

COLLECTING FERNS.—Many of our young friends will, no doubt, make excursions to the woods this month to procure Ferns for winter decorations, and for preservation as specimens. They should remember that the fronds quickly wilt and are easily injured by the wind; therefore, if they would have them in good shape on their return, they should not neglect to carry with them either some folded newspapers stitched together at the back, or some large-sized pamphlets, to place them in as soon as gathered.

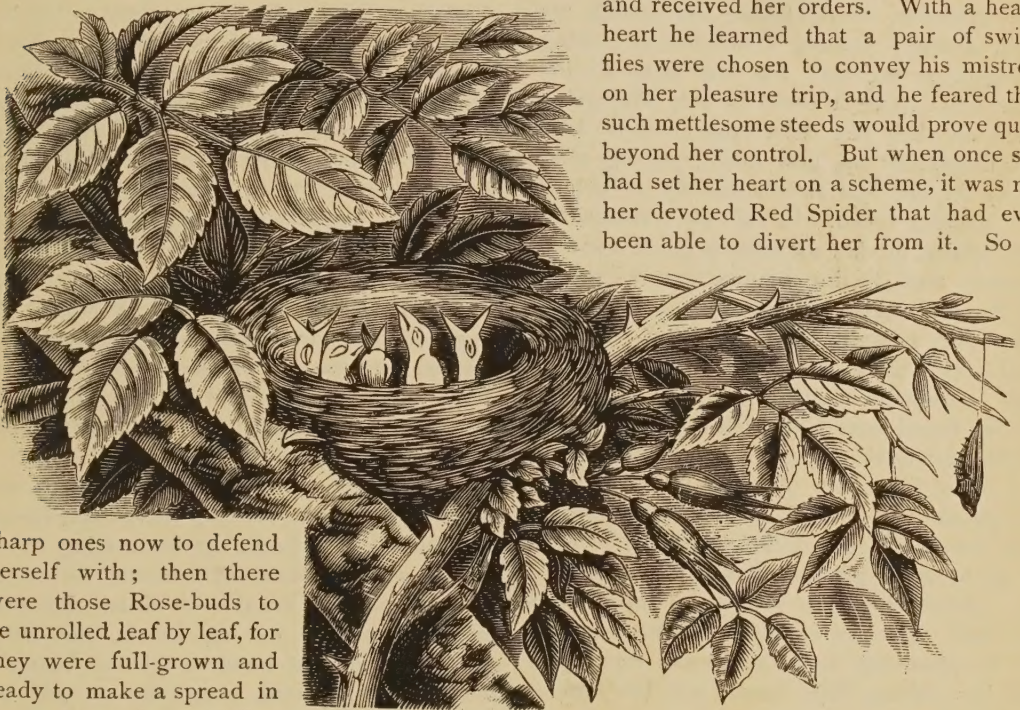
A FAIRY'S DRIVE.

One morning a young fairy awoke in her nutshell couch, and finding herself nice and comfortable under the dainty counterpane which was woven anew over her each night, by a faithful red spider who was always in attendance upon his mistress to do her bidding, she turned her head on her Thistle-down pillow and tried to plan some pleasure for the day before her.

To be sure, there were numerous things that she had been told to do that were still undone: the thorns on the Rose-bush near by were not yet all sharpened—but she was tired of sharpening thorns—surely the old bush had enough

hind a matched team, and Red Spider should arrange at once for it. And her day should not be all lost either, for she would go to the humming birds' castle and take word in person, instead of sending a note; for she had long wanted to see the wonderful place where they lived in winter, of which she had heard so much—had wanted to see, outside and in, the curious building thatched from turret to base with the scales of the Fir cones, and finished up inside until it was a marvel of beauty. Yes, she'd go this day.

So, springing from her couch, she rang a Bluebell, and Red Spider answered through a Trumpet Flower that opened its disc in her bower, and received her orders. With a heavy heart he learned that a pair of swing flies were chosen to convey his mistress on her pleasure trip, and he feared that such mettlesome steeds would prove quite beyond her control. But when once she had set her heart on a scheme, it was not her devoted Red Spider that had ever been able to divert her from it. So he



sharp ones now to defend herself with; then there were those Rose-buds to be unrolled leaf by leaf, for they were full-grown and ready to make a spread in the world; and a nest full of

robins that wanted their eyes picked open so they could see what was going on; a note to be written and sent to the humming birds to let them know that the Honeysuckles were just coming out; and there was that chrysalis, too, that had to be opened to let out the butterfly which was now ready to flit about over the flowers—yes, and over the heads of fairies, too. Oh, dear! they must just all wait.

Why couldn't she sail off on a nice trip and enjoy herself, she'd like to know, instead of always having to poke along, whenever she rode, behind a slow beetle who was always stupidly striking his head against something and falling down? and besides he never cared to travel except at night, and she'd like a ride by daylight for once in her life. Anyway, he was too slow a coach for her. She'd not stand it any longer—not she. She'd have a ride this very day be-

procured a pair of strong horse-hair reins to guide them, and the shell of a blue bird's egg for a coach, in whose safe depths he hoped his giddy mistress might ride unharmed.

Meantime the fairy took her morning bath under the falling drops of a Caladium leaf, and proceeded to make a gay toilet more fit for a humble-bee opera or a mosquito concert than for the dust and wear of travel. She had yet to learn that in the glare of daytime modest colors are the most becoming. So she arrayed herself in the hues of the rainbow, and wore an enormous brooch made of a poor ladybug whose brilliant color and shapely form had made her a sacrifice to this silly fairy's vanity; so that Red Spider often thought, with a sigh, that were not his services so essential to her, his own life would not be safe on account of his scarlet hue.

Finally the little maid declared herself ready

all but her laces, and tripped up to Red Spider to have them made to order at once. Without a murmur he commenced to decorate his fairy mistress from top to toe with such marvelous drapery as the looms of Mechlin never fabricated. Then, panting and puffing with his labors until he was redder than ever, he assisted her to the coach, which was rocking and swaying with the impatience of her restive team. She was scarcely seated, when they flew at right angles to the route she was to have taken; going through the air at headlong speed and then stopping so suddenly as to nearly throw her out of her seat. Before she had recovered from her flurry and fright, off they darted again like lightning, nearly taking her breath, and again abruptly pausing a moment and swing-swinging in mid-air. She was about to consider what route it could be they were going, when off they flew at a tangent—now here, now there, now up, now down, pausing alternately for one fearful instant, only to dash off at a madder speed. In vain she screamed for Red Spider, in vain she tried to guide her fiery coursers, until, having become utterly exhausted, she sank back with barely enough energy left to pray a frantic prayer for relief. But not until approaching twilight did they weary of their spasmodic flights; and then the little maiden found herself far from home in the land of the brownies—a queer little people that she had never liked, and of whom she felt afraid; though she had often been told that it was to their busy care around the young tender roots of all beautiful growing things that the fairies are indebted for their loveliest nooks in wood and dell. But she cared not for this now, but fell to pondering how she should ever again find her darling little bower and her faithful Red Spider.

Just then she saw a friendly-looking beetle, who seemed just ready to start on a night journey, with his fire-fly lamps on either side of his snail-shell coach, and he readily consented to take her home at once. With her laces all torn and her pretty dress ruined, she nestled down inside the protecting coach, feeling so safe and secure that the buzzing of the beetle, which she had always thought so disagreeable, really sounded musical in her ears. She thought sadly of the neglected duties of the day, and wondered if to-morrow would be too late to make amends. But the lesson this little fairy maiden learned this eventful day was never forgotten. She became a wiser and a better fairy, so that Red Spider had much comfort in her, and was never more afraid of being sacrificed on account of his gorgeous color.

[“A Fairy’s Drive,” published some time since

in the *Christian Union* under the title of “A Fairy’s Mistake,” is from the pen of a gifted and favorite writer, and now forms the introduction to a series of fairy stories to be written expressly for the readers of the Young People’s department of this MAGAZINE.]

A SUMMER HOUR.

A hundred miles from the bustling town, I am now visiting in the country; almost before I could put down my satchel and say “How do you all do?” JOE said, “I want you to come down to the creek.” I knew that the creek meant a little stream in the rear of the old-fashioned country homestead, not many rods away; but, for the sake of propriety and deference to the older members of the household, we managed to exist until the next day without carrying out the juvenile design. The next morning, however, JOE and FRED and I, regardless of everything but our own selfish pleasure, sauntered leisurely off to the creek. It is a pure, limpid stream meandering around stones, and rippling over rough places, laughing in the sunshine falling upon it through the overhanging trees that nearly kissed the water. It suggested sleep and dreams of loved ones, and I lay on the shawls and looked up into the Elms above me, while JOE and FRED promised to keep the cows away and busy themselves looking for specimens, as they said.

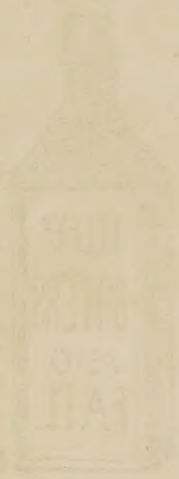
It was a delicious hour for me. Here was sweet music of the rustling leaves, the breeze that fanned my cheek, the murmuring sound that the water made at my feet, and the sweet, pure thoughts of loved ones absent, but how dear! I reached out my hands, and fancy clasped the dearest hand in all this beautiful world—how beautiful, except for sin and the consequent sorrow that has crept into it.

“But now a joy too deep for sound,
A peace no other season knows,
Hushes the heavens and wraps the ground,
The blessing of supreme repose.”

Soon JOE came with his hands full of nature’s handiwork, but nothing could arouse me from my dreamland. The boys lay down beside me, and JOE said, “I wish Ma liked to study botany.” “Oh,” said FRED, “Ma is not lazy enough.” FRED took a long Grass, ripe with its seeds, and drew it slowly across my cheek to waken me, and exclaiming, “I have found a specimen,” he handed me a leaf, with the information that it belonged to the Gooseberry family; and, surely enough, it did, and I roused up in astonishment, at FRED’s precocity. His eyes glistened with delight, and I lay back with a low chuckle, as I saw him eating a handful of mellow Gooseberries.—M. H. S.

THE
OFFICE OF THE
TREASURER OF THE
UNITED STATES
DEPARTMENT OF THE
TREASURY
WASHINGTON, D. C.

THE
OFFICE OF THE
TREASURER OF THE
UNITED STATES
DEPARTMENT OF THE
TREASURY
WASHINGTON, D. C.



THE
OFFICE OF THE
TREASURER OF THE
UNITED STATES
DEPARTMENT OF THE
TREASURY
WASHINGTON, D. C.

THE
OFFICE OF THE
TREASURER OF THE
UNITED STATES
DEPARTMENT OF THE
TREASURY
WASHINGTON, D. C.

THE
OFFICE OF THE
TREASURER OF THE
UNITED STATES
DEPARTMENT OF THE
TREASURY
WASHINGTON, D. C.

THE
OFFICE OF THE
TREASURER OF THE
UNITED STATES
DEPARTMENT OF THE
TREASURY
WASHINGTON, D. C.

THE
OFFICE OF THE
TREASURER OF THE
UNITED STATES
DEPARTMENT OF THE
TREASURY
WASHINGTON, D. C.



ANNUAL PHLOX.

PAINTED FOR VICK'S MONTHLY.